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Contents for 16 October 1926

Page

Drawing Attributed to Charles Le Brun (Frontispiece) 586

Post-War Architecture in Germany. Illustrated. By Dr. Hermann Muthesius 587

Ostia, the Ancient Port of Rome. By F. O. Lawrence 597

Royal Commission for Cross River Traffic: Evidence by Lord Crawford (A. R. Powys), Mr. Arthur Keen and Sir Banister Fletcher 606

Elements of Design and the Teaching of Building Construction. By Professor A. E. Richardson 612

Review of Books Illustrating the Exhibition of Decorative Arts, Paris. By J. Murray Easton 616

Correspondence:

Broadcast Criticism. By James Ransome 616

Obituary:

Somers Clarke. By Mervyn Macartney 617

Sir Charles Tamlin Ruthen. By Dr. Raymond Unwin 618

George Wittet. By John Begg 618

Legal: The Standard of Natural Lighting in Towns. By Percy J. L. Waldram 619

The Prince of Wales and Dominion Architecture 620

A.B.S. Scheme of Insurance 619

Warning to Members 619

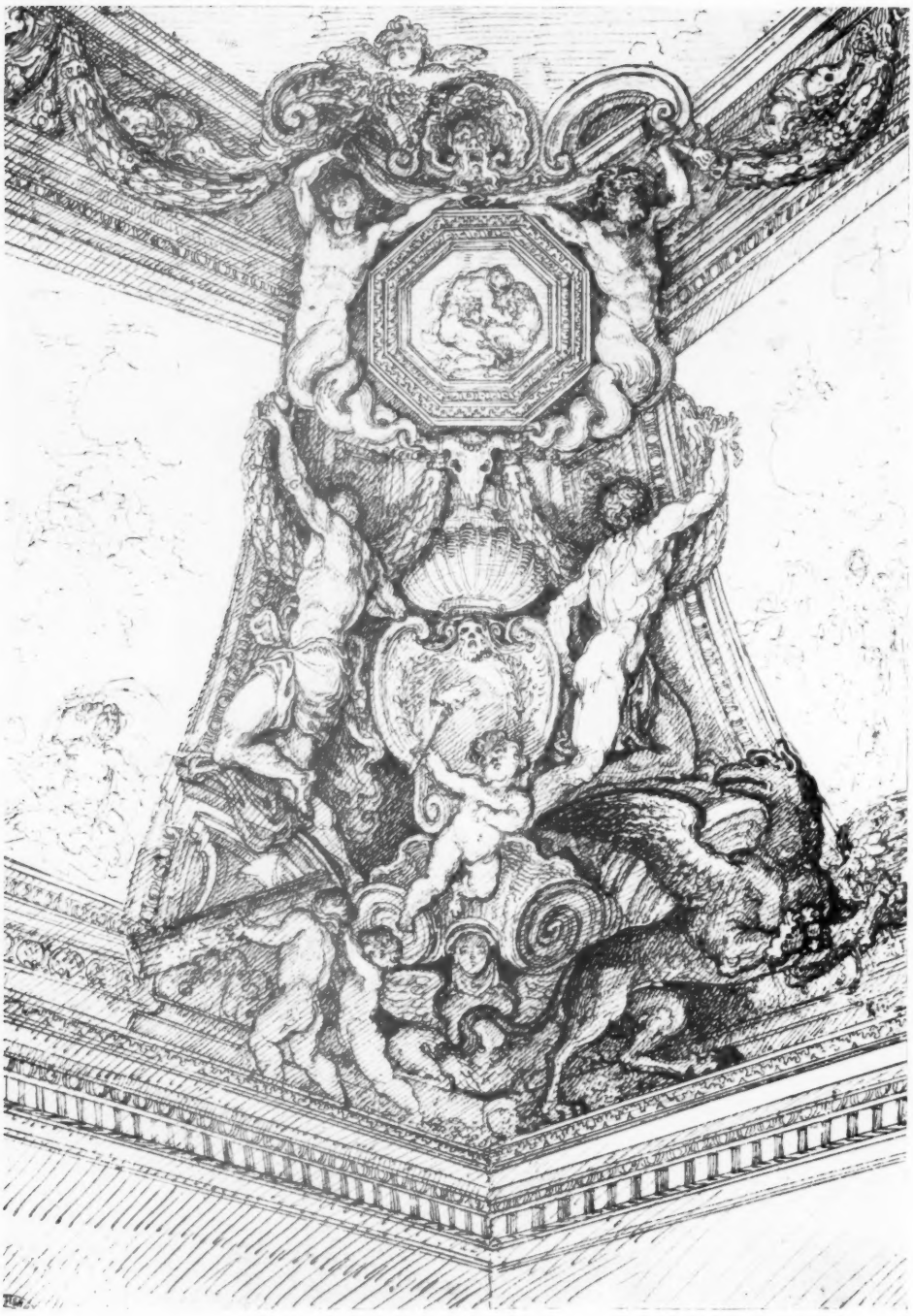
Board of Architectural Education 620

Notices 620

Election of Members 621

Competitions 623

Members' Column 624



From an Original Drawing attributed to Charles le Brun
(R.I.B.A. Collection)

RHINE-HALL, DUSSELDORF EXHIBITION, 1926
Architect: Wilhelm Kreis

Post-War Architecture in Germany

BY DR. HERMANN MUTHESIUS

[*Honorary Corresponding Member*]

BEFORE giving a survey of post-war architecture in Germany it should be pointed out that the extent of building has been very small because Germany, worn out through the war, was obliged to attend only to her most urgent needs. Her greatest need was a supply of dwelling-houses, because during, and shortly after, the war building had almost entirely ceased; and it has not yet been possible to solve the post-war housing problem even to a tolerable degree. Apart from the impoverishment of the country, the legal protection afforded to tenants has contributed to this result. As in other countries during the war, it was found necessary to introduce state control in order to avoid an undue increase in rents, but whereas in other countries post-war rents were gradually raised and adapted to the general economic conditions, the rents in Germany have been maintained by the Government up to the present at so low a figure that in the case of new buildings they would have to be increased at least to three or four times the amount of the rents of pre-war houses. However, as it was necessary to build, the state put forward schemes of subsidies. By this means the building of houses has been started on new lines. It is, however, far from satisfactory, as it has been found impossible to reduce the rents of new houses to less than double the rents of the old houses. Here is a problem which no one yet knows how to solve; because, if the Government would allow in the present social distress the raising of old rents considerably, it would mean raising wages at the same time, which the present German economic conditions cannot stand.

It is to be noted that the new subsidised buildings show a considerable improvement compared to the pre-war architecture. In view of the sub-

sidy the state exercises the right to influence the planning and construction of the houses. Moreover, since the war a new building law has been passed which does away with the bad planning of the old town blocks of flats. Another change, at least in large towns, which has taken place is that the state subsidises only those buildings which are planned by architects. This is important because the pre-war blocks of flats were, almost without exception, erected by speculative builders ; hardly in any case was an architect employed ; the flats were simply a by-product of land speculation.

The new building regulation together with the state subsidy has produced satisfactory results if not in quantity at least in the quality of the buildings. The planning of most of the new houses is good ; the architecture is simple and dignified. Round every German town a belt is being formed of new garden-city buildings erected under state control. Detached and semi-detached houses, however, formerly the aim of garden-city building in Germany, have proved too expensive and cannot be continued. Nowadays the most usual form of building is for the houses to be arranged in rows. The new building regulation has involved considerable reductions not only in height but also in the width of the buildings. If it were possible to adapt the old rents to the new houses, if only to a limited extent, a sufficient supply of houses would soon be forthcoming.

Apart from the building of houses great progress has been made since the war in industrial and factory buildings. Here, too, a considerable improvement is apparent. Formerly no particular attention was paid to the appearance of such buildings, but architects are now being called upon to design them. A great many of them were erected in consequence of the inflation, when all currency had to be materialised in real property as it otherwise rapidly lost its value. The result of the stabilisation of the mark and the consequent economic depression is that, in many cases, the factories are overburdened with buildings, which only add to the expense, as they must be kept in good condition

Garden City Dwelling Houses at Zehlendorf-West
Architects : Paul Mebes and Paul Emmerich

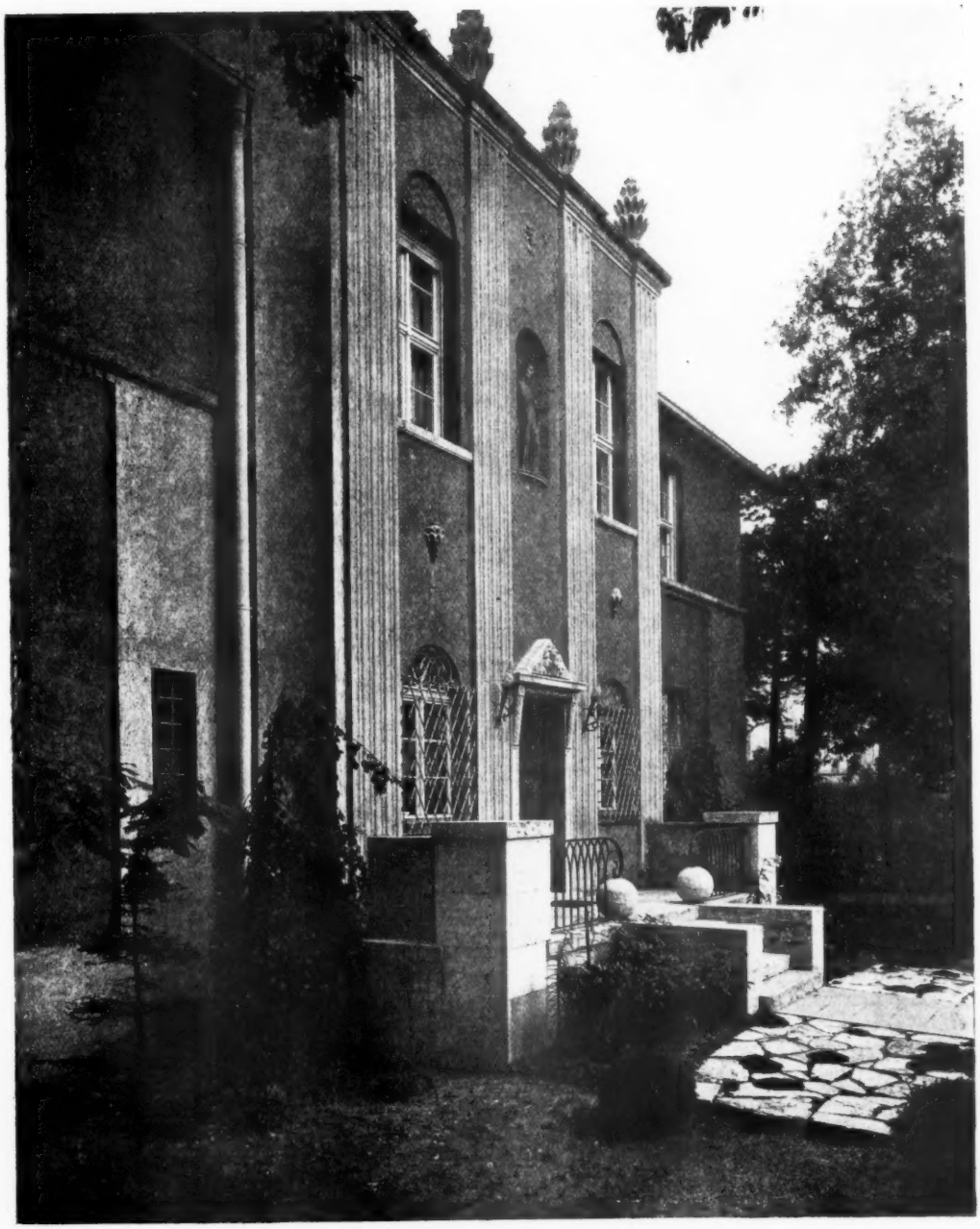
House in München-Laim
Architect: Theodor Fischer, München

House at Charlottenburg
Architect: Hermann Muthesius, Berlin-Nikolasse

Row of Houses near Botanic Gardens, Berlin
Architect: Otto Rudolf Salvisberg

GROUP OF HOUSES IN BERLIN-NEUKÖLLN
Architects: Paul Mebes and Paul Emmerich, Berlin

HOUSES AT WITTENAU, NEAR BERLIN
Architect: Hermann Muthesius, Berlin-Nikolasse

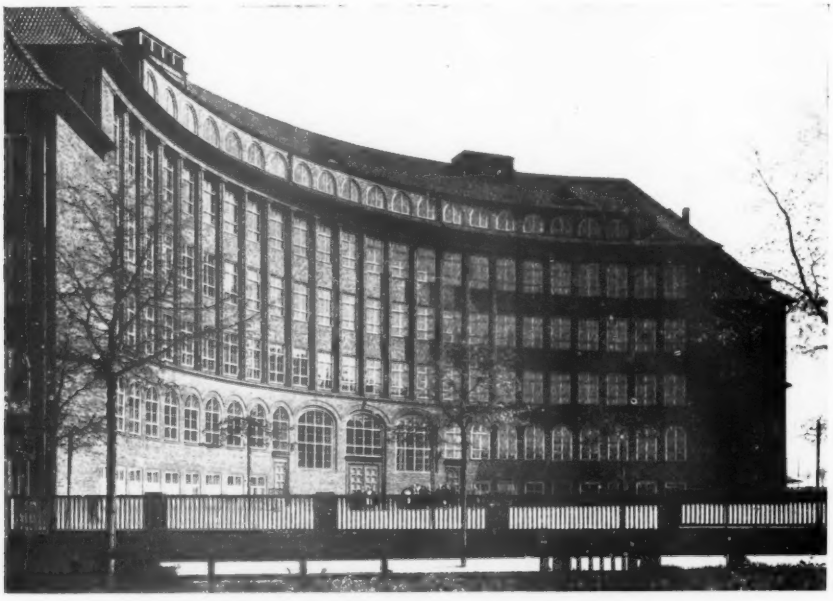


House of R. Frenkel, Grunewald—Garden Entrance
Architect: Albert Gessner

and the interest on the cost of building has to be paid.

Apart from the buildings already mentioned little has been built. The building of country houses which was carried on extensively in pre-war days has almost ceased. A few *nouveaux riches* have erected large houses ; in most cases, however, they have not had the judgment to employ a good architect but have given the commission to builders and minor architects who had pushed themselves forward. Only a fraction of post-war country houses has fallen into the hands of architects of repute.

Plans for large office buildings, railway stations, theatres, concert halls and other public buildings, have been designed in plenty, but none has been executed. Generally speaking, architects exhaust themselves since the war in *projets*. This exclusion from real work induces young architects often to indulge in fantastic and eccentric compositions of all sorts. The new generation is captivated by the problem of a so-called new architecture. They hold that the whole of existing architecture is wrong and that an entirely new architecture must be created. It is a common delusion that the germs of this new architecture are to be found in America. Sky-scrapers are highly admired, and the young architectural world is dominated by the desire of designing skyscrapers. In public competitions of any sort, the majority of plans are provided with a tower-like part, even when the purpose of the building is unsuited to it. It is entirely forgotten that in the present distress in Germany the cost of these tower-like erections prevents the carrying out of any construction of this sort, apart from the fact that in Germany neither the conditions of the site nor the amount of business, such as exists in New York, make a skyscraper desirable. The present German craze for sky-scrapers resembles an epidemic disease.



Board School, Hamburg
Architect: Fritz Schumacher, Hamburg

Inspiration for the new architecture is also derived from the works of the American architect, Frank Lloyd Wright. His name is current among the young generation, and he is considered the

leader of the New Architecture. The works that have really been executed in the " new style," however, have little resemblance to the work Wright does in America. The architecture which the young group aims at follows the latest Dutch line. Cubic-shaped and roofless masses are the formal principle that obsess the mind of the young generation.

" house," by which they mean that a house should be constructed like a machine.

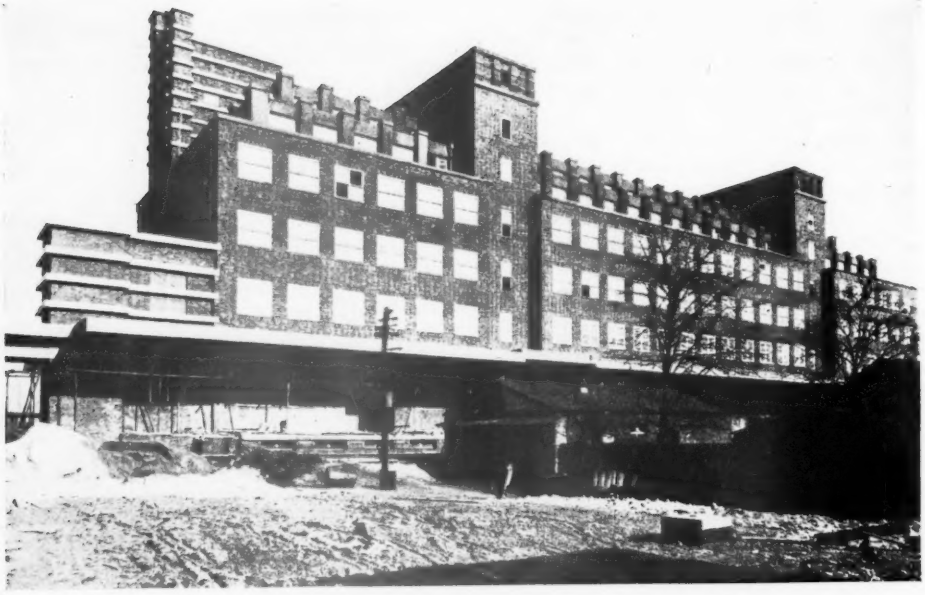
It is somewhat amusing to note that the representatives of cubic constructions deceive themselves into believing that their creations are purely constructive and economic and that they have nothing to do with art. They claim to build usefully and at the same time they sin largely against usefulness

New Building for Dresden Bank, Chemnitz
Architect: Heinrich Straumer, Berlin

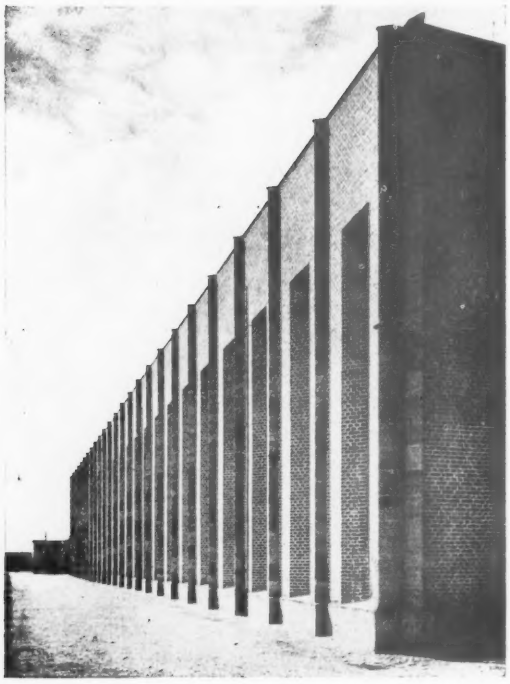
Another source of influence lies in the "machine." The machine is declared to be the most perfect creation of man, because it is designed only to be useful. As usefulness is declared to be the real aim of every human work, the machine is considered to be the model even for architectural construction. Some architects of the young generation even go so far as to say (from the example of Le Corbusier) a " living machine " instead of a

and construction. The reason is that their minds are entirely possessed by the suggestion of cubic form.

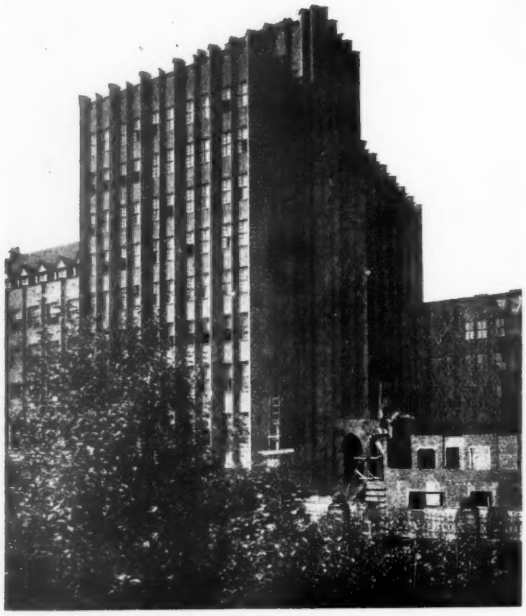
Only very few examples of such " modern " buildings have been executed, but a formidable amount of philosophic and æsthetic literature has developed, which deals with the problems of the so-called New Architecture, and writers of journals and newspapers sympathise, as a rule, with the new tendencies. However, it is a well-known



FACTORY BUILDINGS, OBERHAUSEN
Architect: Peter Behrens, Neubabelsberg



WAREHOUSE, NÜRNBERG
Architect: E. Fahrenkamp



OFFICE-BUILDING AT DUSSELDORF
Architect: Paul Bonatz, Stuttgart

AUDITORIUM OF A BIG THEATRE, BERLIN
Architect: Pölzig, Potsdam

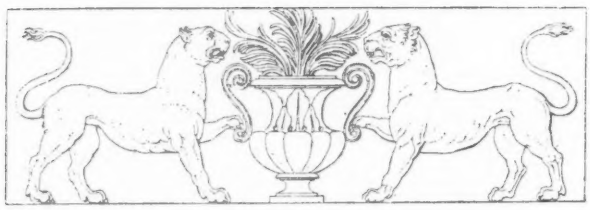
INTERIOR OF WIRELESS EXHIBITION HALL, BERLIN
Architect: Heinrich Straumer, Berlin

fact that even the biggest output of literature does not bring about a new art if the art does not possess sufficient life to assert itself, and whether this is the case is an open question. It is fortunate, however, that the majority of architects now active in Germany work on normal, progressive lines and have nothing to do with the extravagant fancies of the "Modern Architects."

Since 1900 a freer kind of architectural expression has become established. It is founded on industrial and commercial buildings which were the first to dispense with the classic orders. Classical forms are still here and there employed, but generally speaking classic architecture in Germany can be considered as extinct.

It is satisfactory to note that brickbuilding has come to the front and become firmly established, especially in northern Germany.

Were German architecture given a chance it would be seen that it is on the healthy road to progress. The fantastic efforts of the young generation would, through practical work, become modified and the influence of the philosophy of a revolutionary architecture would diminish.



Ostia: The Ancient Port of Rome

BY F. O. LAWRENCE, B.ARCH. [*A.*], ROME SCHOLAR IN ARCHITECTURE, 1920.

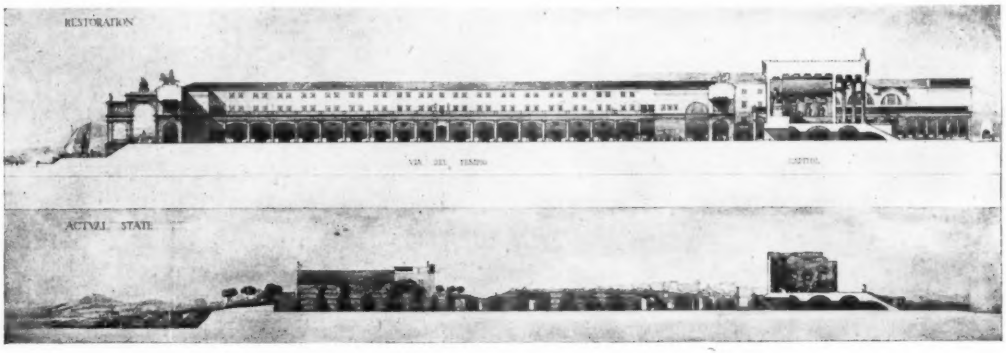


FIG. 4.—SECTION ALONG VIA DEL TEMPIO, FROM TEMPLE OF JUPITER TO RIVER TIBER

OSTIA, which is still in the process of excavation, offers a new, if apparently unexciting, subject for study. But it is far from being a dull subject, because the discoveries at Ostia have added a new chapter to our knowledge of the Roman world, and in particular are throwing new light on the commercial buildings and private dwellings of the Romans.

As far as we can judge from the excavated portion, the city consisted chiefly of commercial buildings and private dwellings, and the temples and public buildings have so far proved to be the least interesting part of its composition. In many parts of Italy the public buildings and temples can be studied to better advantage, but no other place gives us so many examples of the private and commercial buildings of this period. Ostia held the same position of importance to the Roman world as Liverpool does to England. All the great shipping corporations had their headquarters there, and the docks and great storehouses were comparable with those of our own city to-day.

Judging from the earliest remains which have been found, Professor Vagliere places the foundation of Ostia, the ancient port of Rome, at about the third century B.C. Not until 217 B.C. during the second Punic war is it mentioned as a naval base and harbour of Rome. Stone walling which can definitely be assigned to the Republican period is fairly common, but in most cases it has been reused as foundations for larger buildings. That the earliest city covered quite a small area has been recently shown by Professor Calza, who is now in charge of the excavations and has lately discovered its complete circuit. Several buildings still remain of the Augustan period, among the most notable of them being the theatre.

Ostia stood on the left bank of the Tiber. Claudius built a harbour on the right bank and connected it with the river by a canal which formed an island of the land thus cut off. Trajan further developed this scheme and built another harbour (Fig. 1).

Domitian, who became Emperor in A.D. 79, seems to have begun the rebuilding of Ostia on the higher level on which it now stands, but the greater part of the work belongs to the period of Hadrian and the Antonines in the second century. Afterwards, as the sea gradually receded and the river changed its course, Ostia lost its importance and Porto, as the new port was called which grew up on the right bank of the river, had already in the fifth century superseded it. In the sixth century Ostia is described as being far from the banks of the river and undefended by walls and the Via Ostiensis, the great road to Rome, entirely neglected, while ships still came into Porto and discharged their cargoes into barges to be towed up to Rome by oxen.

The incursions of pirates further assisted the destruction of Ostia, which gradually became a stone quarry, from which marble was afterwards transported for the building of the cathedrals of Pisa and Orvieto.

In the middle ages the still inhabited village of Ostia

sprang up not far from the old port, and in the fifteenth century the fine castle which still stands was built by Guiliano da Sangallo on a bend of the river. After a great flood in 1557 the river again changed its course and is now some distance away. The modern village stands three miles from the sea, but a new town is springing up on the coast and rapidly becoming a popular seaside resort. The advent of an electric railway which has just been completed will help this development, and make the excavations more easily accessible to visitors. A fee of five lire has also just been imposed for admission, and this no doubt will attract many tourists.

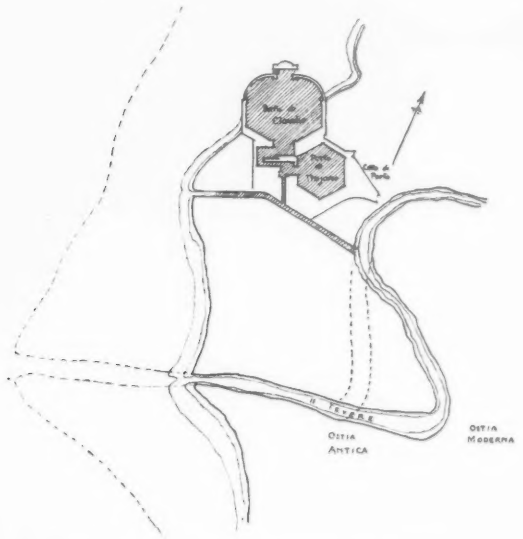


FIG. 1.—HARBOUR OF CLAUDIUS AND TRAJAN

The area at present excavated, which is only a small part of the whole city, lies between the main road to Rome and the river (Fig. 2). If we approach Ostia by this road, our way to the city gate lies through the cemetery. Inside the gate after passing an area of smaller domestic buildings we come to the baths, which are chiefly notable for a very fine black and white mosaic on a large scale. Behind the baths are the barracks of the "Vigiles." Numerous scratchings on the walls of this building are of interest. One name is scratched several times outside the main entrance, and it is surmised that one of the garrison failed to return before the gates were shut, and spent the night outside, whiling away the time by scratching his name on the wall. Inside are to be found scratchings referring to sergeant-majors, which make it quite clear that sergeant-majors were no more popular than they were during the late war.

Farther on we pass the open air theatre, and behind the Piazza delle Corporazione which enclosed the temple of Ceres. Here the important shipping firms had their offices and outside each shop or office is a

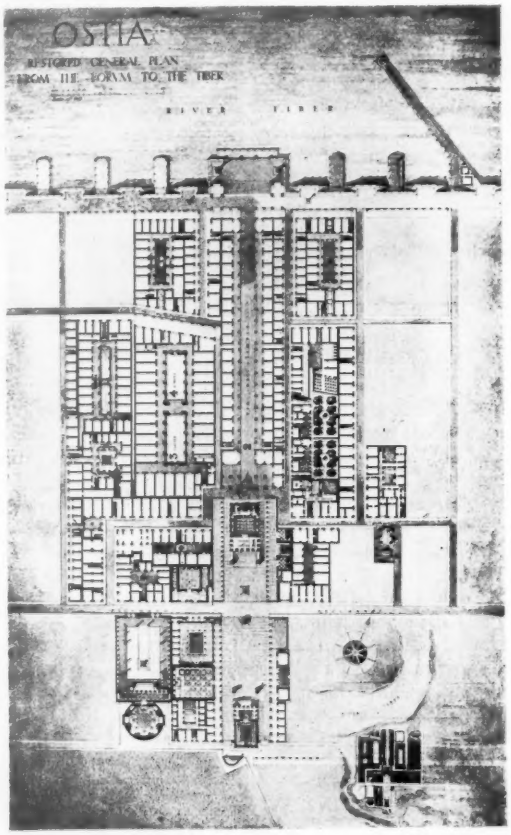


FIG. 2.—OSTIA: RESTORED GENERAL PLAN FROM THE FORUM TO THE TIBER

mosaic in black and white depicting their particular line of business, and in some cases giving the name of the firm. This piazza was formerly thought to be the forum.

We then pass an area of shops and houses and two very large warehouses. It is interesting to note in these warehouses that the ground floor is raised about 9 inches from the ground, so that air circulates freely underneath and the floors are

FIG. 3.—PHOTOGRAPH LOOKING ACROSS FORUM FROM TEMPLE OF AUGUSTUS AND ROME TOWARDS TEMPLE OF JUPITER

in consequence always dry. Grain was probably stored here.

Beyond this we come to the forum and the real centre of the town and the area which I have taken as the subject of my restoration. Most of the buildings here were constructed during the life of Hadrian, but the site of the earliest city lies within this area. The forum has only recently been identified and is still in the early stages of excavation. It contains a temple dedicated to Augustus and Rome. Facing the forum across the main road are the Capitol and temple of Jupiter (Fig. 3). This was probably the finest architectural feature of the city and fragments of practically a complete entablature compare favourably in style and workmanship with the best work of this period.

Behind this temple but slightly off its main axis a broad arcaded street of shops runs to the river. It begins at the temple end with a portico of brick piers, and probably originally terminated at the river end in the same way, but here the river has changed its course and encroached on the city, and it is not quite clear what happened at this end. It is however practically certain that a broad roadway ran parallel to the river bank and that there were quays for loading and unloading barges which plied the river between Ostia and Rome (Figs. 4, 5 and 6).

To the left of this Via del Tempio, and separated from it by a narrow unpaved passage, is a large open market, with a covered arcade all round, off which open large storerooms. A concrete vault covered these rooms, and staircases at two angles show that the building was at least another storey high. Adjoining this on the west is an exactly similar market on a smaller scale. This is bounded again on the west by a row of shops opening on to the Via Epagathiana, called after a warehouse recently discovered on this street in which was found a tablet bearing the inscription, " Horrea Epagathiana et Epaphroditiana " (Fig. 7). The street is only partly excavated, but the warehouse has been cleared and is being reconstructed. The entrance is through a fine portone, the many fragments of which have been

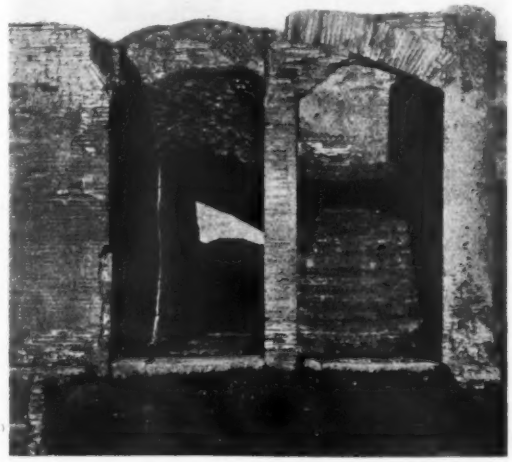


FIG. 5.—STAIRCASE AT ONE END OF VIA DEL TEMPIO

carefully put together and rebuilt in their original positions. It follows the usual form in Ostia and is composed of three-quarter columns carrying a richly decorated entablature and pediment all in brick. A long passage leads to an arcaded cortile off which are lock-up storerooms. In general form this cortile closely resembles those of the later Italian palazzi with superimposed arcades. The niche probably contained an image of one of the gods and is all in rubbed brick of different colours (Fig. 8).

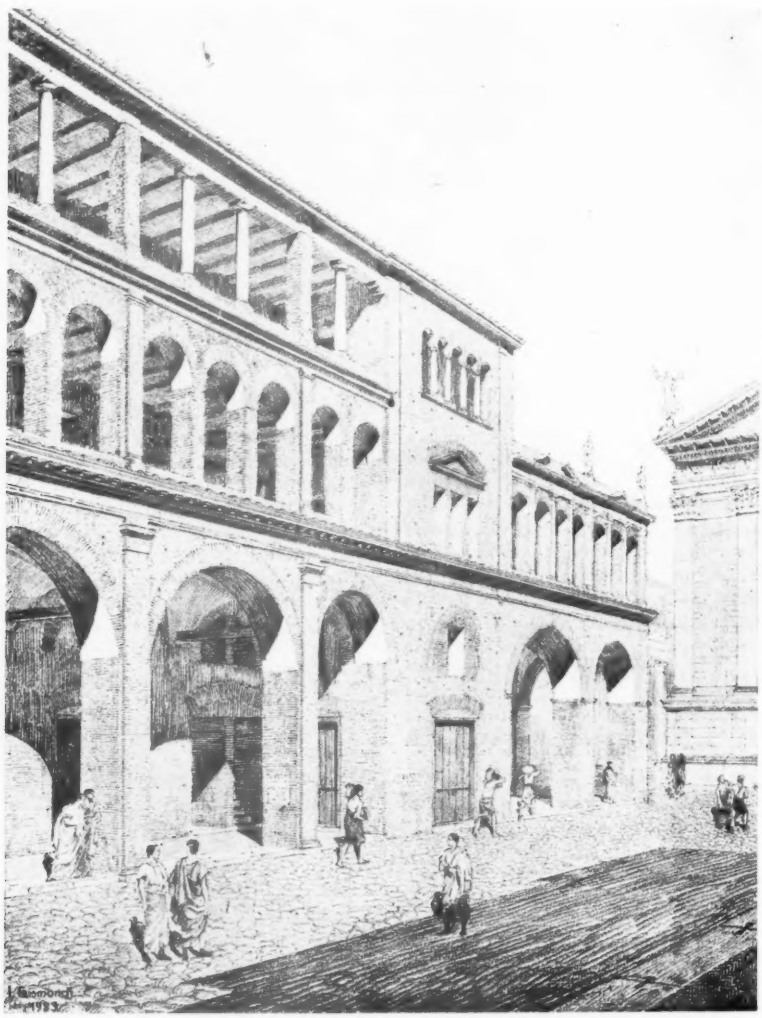


FIG. 6.—OSTIA: RECONSTRUCTION OF A HOUSE IN THE VIA DEL TEMPIO (Architect: I. Gismondi)

To the north of this block is the office of the measurers, the officials who measured the grain before distribution. Only the entrance to this building is preserved. It is enriched with brick pilasters carrying

a pediment in which is the sign of the measurers in terra-cotta.

To the east of this runs a street of shops noteworthy because it is covered on both sides, on the one side by means of an arched arcade and on the other by means of a balcony carried on stone corbels (Figs. 9 and 10).

On the main street lies a building called the "bazaar." Here, entering through a narrow passage, we come to a courtyard surrounded by shops. Staircases lead to living rooms above and there must have been a wooden balcony all round (Fig. 11).

The area to the east of the Via del Tempio contains many examples of shops and private dwellings. The Case di Diana is of particular interest, a private house which has many points of resemblance to the "domus" of Pompeii but is unique at Ostia.

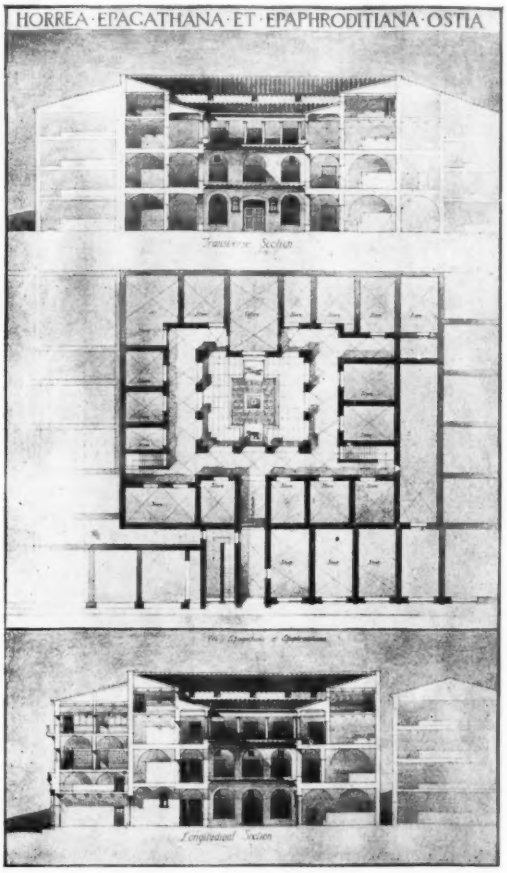


FIG. 7.—PHOTOGRAPH OF DRAWING
RESTORATION OF HORREA EPAGATHIANA ET EPAPHRODITIANA

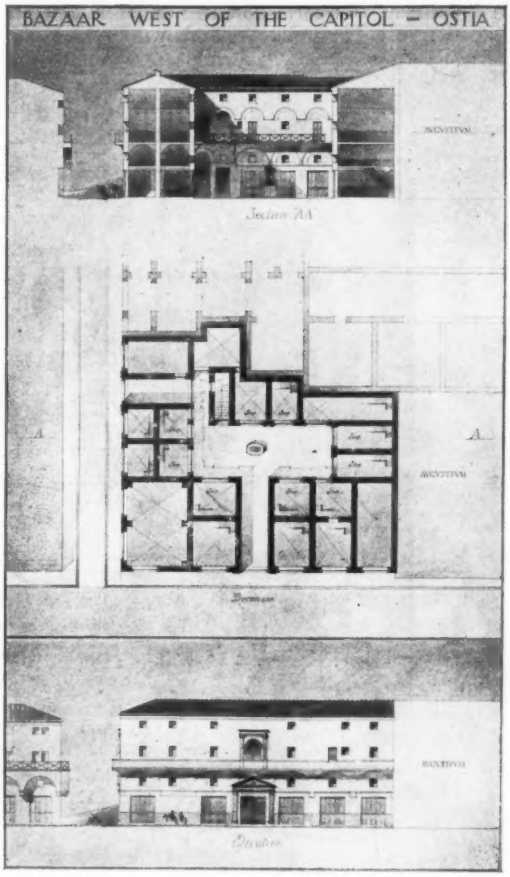


FIG. 11.—PHOTOGRAPH OF DRAWING
RESTORATION OF BAZAAR ON MAIN STREET

The "caupona" or cook shop on the opposite side of the street is an interesting example of a type belonging to a later period, and bears a striking resemblance to a modern Italian "bar."

The Insula dei Dipinti, a block of apartment dwellings, is an example typical of Ostia (Fig. 12). It is L shaped in plan, containing three houses of

which the largest, forming the base of the L, and known as the Casa di Giove e Ganimede, probably belonged to the owner of the block and contained a shop (Fig. 13). The other two are similar in plan. At the back they overlook an open space which was probably a garden, as no paving has been found there (Fig. 14). It takes the place of the peristyle of the " domus " and corresponds to the " cortili of the later palazzi." The walls throughout the ground floor are concrete with a brick facing and about 60 cms. thick. The rooms are vaulted in concrete at a height of 8 metres and except in the more important rooms there is a mezzanine floor at a height of 4 metres. Pompeii. The designs are generally formal, and crude attempts at perspective are occasionally introduced; the colours are brilliant and generally well preserved. The floors of the principal rooms are finished with mosaic in black and white geometrical patterns. Mica was used for the windows, probably in a wooden frame, as no trace of marble or metal has been found.

Taking the plan of the middle house as a typical example, the Casa di Bacco Fancuillo, called after a small statuette found in the garden, we see it is divided into three sections. The centre section contains a corridor A, opening directly on to the street, and a vesti-

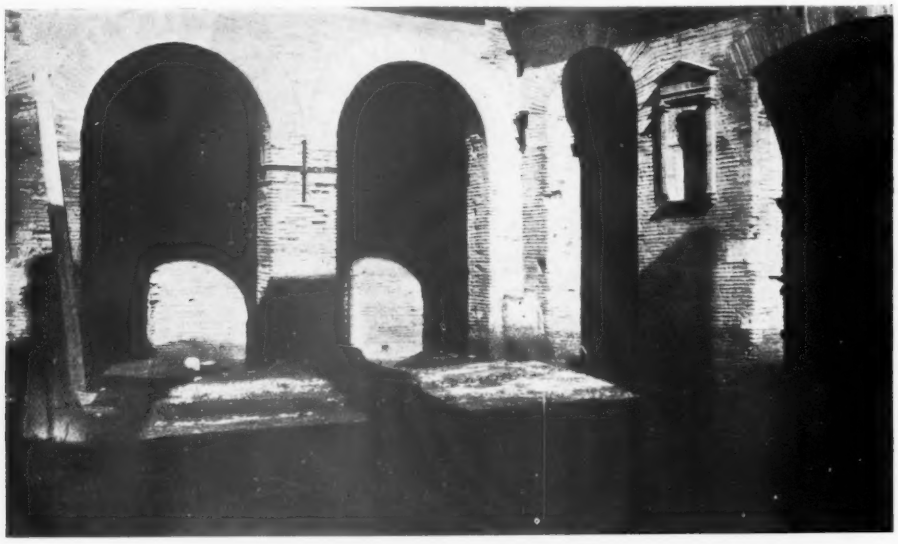


Fig. 8.—Cortili of the Horrea Epagathiana et Epaphroditiana

The remains of staircases prove that there was a third floor, and as the law laid down a height limit of 20 metres for private buildings we can imagine this block to have been four or five storeys high. The thickness of the walls are a further indication that it was of considerable height. The balcony at the first floor is formed by the extension of the vault beyond the outside wall about 1 metre and arching back. The main entrances are enriched with pilasters and pediments built in hard faced red brick with a very thin joint; the remainder of the façade was faced with bricks varying in colour and with a thicker joint, and was most probably finished in plaster. Internally the walls were finished with plaster and painted, but the work never reaches such a high standard of excellence as is found at

bule B, which together serve as a means of circulation between the remainder of the rooms. It is difficult to assign to any particular use the other three small rooms of this section. The two rooms D and E in the left section were probably dining rooms and both obtained light from the garden front, one by means of a large window in the dividing wall. The right section also contains two large rooms; that on the garden front clearly corresponds to the tablinum of the " domus." It is 8 metres in height and has six large windows in two rows overlooking the garden. The walls are elaborately decorated with paintings and the floor finished with black and white mosaic. The other room contains a staircase, the only means of communication with the mezzanine floor. The first three steps are in

brick, the remainder in wood. This room must have been for the service of the house.

The staircase between this house and the larger corner house, built in travertine, ascends directly to the second floor, on which was a separate apartment similar in plan to the ground floor. The staircase ascends again to the third floor to another similar apartment. Altogether there were 15 apartments in this block.

FIG. 9.—ARCADE TO STREET

FIG. 10.—BALCONY CARVED ON STONE CORBELS

Ostia considerably extends our knowledge of the Roman habitation. In the Roman world there were two types of dwelling, the " domus," as seen at Pompeii, which is well known and, I believe, generally accepted as being typical of the Roman dwelling, and the " Insula " of Ostia. Ostia must have been an important and typically Roman city, and the type of dwelling found there must have been modelled on the Roman type, and must take precedence over the " domus " of Pompeii as being typical of the Roman dwelling of the second century. The theory that foreign influence determined the arrangement of the Ostian house can be disregarded when we consider its close connection with Rome. Only this type of dwelling would permit of the population of Rome, which cannot have been less than a million inhabitants, being housed in the comparatively small area enclosed by the ancient walls. In Rome itself there is evidence of this at S. Giovanni e Paolo, and in the city wall at S. Lorenzo, where walls of Roman houses showing windows similar

FIG. 12.—INSULA DEI DIPINTI. ELEVATION TO VIA DEI DIPINTI

FIG. 13.—INSULA DEI DIPINTI, CASA DI GIOVE E GANIMEDE. ELEVATION TO STREET

to those of Ostia have been incorporated in the later buildings.

Literary evidence further strengthens this theory and the " domus " must be regarded as an exceptional type. It is not adapted to the necessities of every class of the population. It was the rich man's house and its characteristics are maintained only so far as they correspond to the needs of the various classes of the people. A comparison of the two types is interesting. While the " domus " of Pompeii develops horizontally and is lighted internally, the Ostian house develops vertically and is lighted externally. The " domus " is built round the centre court, or atrium, and all the rooms open on to this court, and obtain light from it. Windows are practically unknown on the exterior except for very small openings or slits. All the rooms are on the ground floor, and where staircases occur they lead only to some unimportant rooms, generally in the servants' quarters. This is the type found practically without exception at Pompeii, and although the most recent excavations (opened to the public only in 1924) show these characteristics modified to some extent, the type remains substantially the same. In the Ostian house, on the other hand, the atrium, where it occurs, is a subsidiary feature, and the rooms obtain light from numerous and ample windows overlooking a street or open space. The houses are three or four storeys high. Each floor was similar in plan and independent of the rest of the house, but served by a common staircase

Consequently we have a new arrangement of rooms, the disposition of which depends upon the façade, a condition which determines the modern house plan. Thus the result in its general aspect very much resembles a modern block of houses.

Summarised, the chief points of difference of the Ostian houses from the " domus " of Pompeii are :—

FIG. 14.—INSULA DEI DIPINTI. FAÇADE OVERLOOKING OPEN SPACE AT BACK

1. Vertical development with three or four floors and disposition of rooms similar on each floor and with a continuous roof or floor.
2. Development of the façade on a street or open space instead of round an open court or atrium.
3. Introduction of the block consisting of a number of independent apartments, served by one or more staircases opening directly on to the street.
4. Rooms developed on the façade and lighted by numerous and ample windows in continuous lines.
5. Introduction of passages for easy communication between the streets, generally under the staircases.
6. Independence of each floor and each apartment on each floor.
7. Introduction of balconies on the façade.

The Royal Commission for Cross River Traffic

The Royal Commission has been sitting since the middle of September at the Royal Court, House of Lords, and has heard a vast amount of evidence. The terms of reference to the Committee were :

> To survey the whole problem of cross-river traffic in London ; to report what provision should be made to meet future requirements, and, in particular, to consider the proposals made in connection with Waterloo and St. Paul's Bridges. Having regard to the urgency of the question, the report should be completed at the earliest possible date.

The members of the Commission are Lord Lee of Fareham (Chairman), Sir Willoughby Dickinson, Lord Hambleden, Professor Charles Inglis, Sir William Plender and Sir Lawrence Weaver.

On 18 September Lord Crawford gave evidence. He represented a conference of societies which included the Royal Academy, the Royal Institute of British Architects, the Society for the Protection of Ancient Buildings, the London Society, the Town Planning Institute, the Architecture Club, and a conference of engineers. They were, he said, interested in traffic and in the development of London as a whole. They were especially concerned with bridges, from which this subject was inseparable.

THE EVIDENCE GIVEN BY LORD CRAWFORD BEFORE THE ROYAL COMMISSION ON CROSS RIVER TRAFFIC IN LONDON.

By A. R. Powys, A.R.I.B.A., Secretary to the S.P.A.B.

It is no exaggeration to say that of all the evidence submitted to the Royal Commission on Cross River Traffic in London, that given by Lord Crawford was the most convincing and the best presented. Indeed, it is difficult to see on reading it through, even after mature consideration, how it could have been better spoken. The speech was eloquent, was free, was delivered with conviction, was well balanced and no matter of importance was omitted.

In evidence Lord Crawford said :

"Your Commission, Lord Lee, is, in fact, dealing with the greatest problem of re-town-planning in Europe, perhaps in the world, and we are convinced that its solution will largely depend upon the bridge treatment between London Bridge and Westminster, in providing a new avenue or freedom (for it is nothing else) within the most central and important area of the Metropolis. That is the representation I make on behalf of the Conference of Societies."

No architect will dispute this ; neither is it likely that any layman will hesitate to agree with Lord Crawford's opinion of the importance of the work to be done by the Commission. There can then be no doubt that the Prime Minister acted rightly in advising the King to appoint the Commission ; and this even though its findings may include recommendations that may be opposed to existing Acts of Parliament, to the considered policy of the London County Council and to conclusions reached by other bodies whose attention has been directed alone to any single one of the problems which come within the embracing terms of the reference under which the Commission acts. Of the evidence given before the Commission, Lord Crawford's alone will bereferred to here chiefly because he was speaking for a conference of many Societies and bodies, among which the R.I.B.A. was not by any means the least important. Very much other evidence has been submitted, all of it of great interest. Already the mass of it forms a heavy bulk of printed paper that is well worth close study. There is technical evidence, expert evidence and the expression of public opinion, for none of which we have space even for a slight reference. Our readers must turn to the printed word, and they are advised to do so, if they wish to get within a reasonable distance of understanding this most complex question.

In his evidence Lord Crawford submitted to the Commissioners the answers prepared by the conference to a questionnaire which they had issued. This document may be said to form the basis of the view submitted by the conference, and it is therefore reprinted here.

Waterloo Bridge.

Question 1.—Is there any danger of the bridge collapsing and blocking the river :

(*a*) If partially used as at present, or

(*b*) if entirely closed to traffic ?

Reply.—No danger provided adequate precautions are taken.

Question 2.—Is its structural condition beyond repair, or is it practicable from an engineering point of view, to restore its stability and full traffic capacity by underpinning or other methods ?

Reply.—Stability and full traffic capacity can be restored.

Question 3.—If the present bridge should have to be removed and not replaced :

(*a*) How long would the operation take ?

(*b*) How much would it cost ?

(*c*) To what extent would water-borne traffic be interfered with during the progress of the work ?

Reply.—(*a*) Three to four years.

(*b*) Perhaps £500,000 with proper consideration of river traffic.

(*c*) In any case water-borne traffic must be impeded to some extent.

Question 4.—If restoration of the existing bridge should be found practicable :

(*a*) How long would the work take ?

(*b*) How much would it cost ?

(*c*) To what extent would water-borne traffic be interfered with during the progress of the work ?

(*d*) If it should be found practicable to rehabilitate the weakened piers of Waterloo Bridge (by underpinning or otherwise) would the distorted arches have to be taken down and rebuilt ?

If so, can any estimate be formed of the time and cost of the necessary works ?

Reply.—(*a*) Two to three years.

(*b*) £650,000 to £750,000.

(*c*) Much less than under any scheme of removal and replacement.

(*d*) Most desirable, but from an engineering point of view not essential. Estimates of time and cost are included in the maxima of 4 (*a*) and 4 (*b*).

Question 5.—If it should become necessary to demolish the existing bridge and to rebuild it (to the same design) in the same position, for how long would it have to be closed ?

(*a*) How long would the work take ?

(*b*) How much would it cost ?

(*c*) To what extent would water-borne traffic be interfered with during the progress of the work ?

(*d*) Could the present temporary bridge continue in full use throughout such period ?

Reply.—(*a*) Six to eight years.

(*b*) From £1,000,000 to £1,300,000.

(*c*) For five years at least certain of the arches would be impassable by river traffic.

(*d*) Presumed that this is the case.

Question 6.—Would any increase of the traffic capacity of the existing bridge (if restored) be practicable without spoiling or materially interfering with Rennie's design ?

Reply.—No.

Question 7.—(*a*) If the capacity of Waterloo Bridge should be materially enlarged (either by rebuilding or by restoration) would the present approaches and contiguous thoroughfares be able to accommodate the increased volume of traffic ?

(*b*) If the traffic capacity should be increased from three lines (as at present) to four, how would congestion of the approaches be affected ?

Reply.—(*a*) No.

(*b*) Widening bridge will not necessarily attract increased traffic. If it does, increased congestion in the Strand will ensue.

Question 8.—If the existing bridge should be restored, or rebuilt to the original design, and if it should be found desirable for general traffic reasons to make it a "one way" bridge, would its present dimensions be adequate for the anticipated volume of such traffic ?

Reply.—Yes.

Question 9.—Did the existing bridge (before it became damaged) seriously impede water-borne traffic, and to what extent has the erection of the temporary bridge increased the difficulties of navigation ?

Reply.—No evidence has been recorded of more accidents here than elsewhere. Obviously temporary bridge has increased difficulty of navigation.

Question 10.—It is alleged that a widening of the existing bridge (by 12 feet) would render navigation practically impossible. Is this statement well founded or capable of demonstration ?

Reply.—Such widening undesirable quite apart from effect on river traffic.

Question 11.—If the roadway of Waterloo Bridge were widened by 5 feet it would apparently accommodate four lines of traffic, as compared with three at present. Would such a limited amount of widening, if involving the piers also, constitute any additional or appreciable handicap to navigation ?

Reply.—Such widening undesirable quite apart from effect on river traffic.

St. Paul's Bridge.

Question 1.—What is the main case for the erection of a new bridge on the proposed line, and, in particular, what main traffic routes between North and South London would it be expected to serve and relieve ?

No answer.

Question 2.—It is understood that one of the main arguments for the erection of St. Paul's Bridge is that it would provide a much needed relief for London Bridge, which is at present overworked. Would not such relief involve a very wide diversion of traffic, and how could this be effected ?

Reply.—London Bridge is not seriously overworked. Difficulty only lies in its approaches. Still greater difficulty would be encountered by a bridge at St. Paul's, and would therefore provide no adequate relief for London Bridge except at prohibitive cost. All traffic delivered by St. Paul's Bridge would have to cross the East and West routes at Cannon Street and Cheapside. These routes are already overcharged, and another across them would gravely accentuate traffic congestion at this point.

Question 3.—Southwark Bridge is said to be used at present far below its capacity. Would it be practicable, by a diversion of traffic and by improvement of its approaches, to bring this bridge into fuller use, and thus to relieve London Bridge to a corresponding extent ?

Reply.—Southwark Bridge, being adjacent to London Bridge, is better calculated to provide relief than a new St. Paul's Bridge, but the difficulty of the creation of direct approaches on the north bank is great.

Question 4.—Can any (approximate) estimate be formed of the comparative costs and expenditure of time involved in—

(*a*) Constructing the new St. Paul's Bridge and providing it with adequate approaches ?

(*b*) Improving the northern approach to Southwark Bridge (including the gradient of Queen Street) ?

Reply.—We are not in the position to furnish estimates, but we wish to point out that the Corporation of London (Bridges) Act, 1911, does not provide for approaches which will be required North of Cheapside and South of Southwark Street.

Question 5.—Objection has been offered to the proposed St. Paul's Bridge on the ground that the increased volume of traffic over its northern approach would endanger the stability of St. Paul's Cathedral. Is this obejction well founded ?

Reply.—Considering the dangerous condition of St. Paul's Cathedral all risk of increased vibration should be avoided.

Question 6.—(*a*) Would the proposed St. Paul's Bridge, if constructed (or during its construction), constitute any serious additional obstacle to navigation up and down the river ?

(*b*) Are its dimensions, as designed, those best calculated to hinder navigation as little as possible ?

Reply.—We assume that the interests of navigation were adequately considered by the designers of the bridge, but in the opinion of the Conference no bridge at this point is necessary.

Lord Crawford opened his evidence with the following sentence :

"This Conference is especially interested in bridges, but likewise in the development of London as a whole. That subject is inseparable from bridges, and this is the first occasion in history upon which this matter of London bridges as a unit has been dealt with comprehensively ; we therefore look upon the appointment of your Commission as a new factor of the greatest importance, which for the first time enables the whole problem of London bridges to be reviewed as a unit."

He went on to explain why the Conference welcomed the Commission, and in doing so referred to the various authorities which without proper co-ordination were responsible for the provision and maintenance of Cross River Traffic.

"One of the authorities is the Underground Railway, another is the Southern Railway, a third is the City of London, and the fourth is the London County Council. Now this piecemeal treatment is not in the very least the fault of the London County Council or of the Corporation. The London County Council jurisdiction only extends a few miles from Charing Cross ; it does not touch Chiswick or Mortlake, on the river there ; or West Ham at the other

end of London ; it does not even control central London, because the City is in charge of nearly a mile and a half on the northern bank. It is the facts of London government which have isolated portions of the river, and that isolates everything that a bridge involves. It is Parliament, I suppose, which has imposed this situation on the Metropolis. Now we hope to argue all these bridges as a unit before you, on the ground that they are allied in finance, in traffic, in town planning, even in engineering, Hitherto they have been treated as different portions of different questions, whereas we look upon them as different portions of the same question. We place the highest importance upon the provision of a new bridge at Charing Cross ; we look upon that as the key to a solution of many of our traffic difficulties ; the key to the access to great areas of South London, hundreds of acres almost, and very central as regards the Metropolis—very central."

It was natural in the circumstances that the greater part of the evidence submitted by Lord Crawford should have special reference to one existing and two proposed bridges, namely, to Waterloo Bridge and to the suggested bridges near St. Paul's and at Charing Cross. It was inevitable in these circumstances that the evidence fell into two parts, the first referring to Waterloo and Charing Cross bridges and the second to the proposed St. Paul's Bridge.

After referring to the recent reports by Sir Henry Maybury and the London Traffic Committee, saying it is conceded by the Ministry of Transport in the first place, and by the London Traffic Committee, that " with Waterloo Bridge restored to its present dimensions, traffic requirements would be amply met for the next twenty-five or thirty years, given a new bridge at Charing Cross."

Lord Crawford added :

"That is really self-evident, but in my opinion it both understates the necessity for a new Charing Cross Bridge and understates the longevity of Waterloo Bridge."

And he went on to say :

"We are justified, we think, in asking the Commission to recommend London to retain what we now possess, and to concentrate funds and energy on the great central need at Charing Cross. We want to strengthen Waterloo, and you will hear arguments that it can meet requirements at its present breadth. The failure of the bridge is said to be due to age and to the stress of traffic. The argument, of course, is faulty, the logic is faulty. All the arches of the bridge are identical in age, and yet in 100 years No. 1 arch has sunk 0·6 of an inch, whereas No. 4 arch has sunk 28 inches and more. The argument of age clearly is not adequate. Equally that it is stress of traffic cannot be substantiated. All the arches, every arch, is submitted to the same stress of traffic, but No. 4 has sunk fifty times as much as No. 1. Here may I say, Lord Lee, that I listened yesterday, with some surprise, to the statement made by Mr. Mott (I do not know if Mr. Mott is here), that the piers of Waterloo Bridge are in a shattered condition. Well, of course he did not mean to apply that to all the piers, though the phrase suggested that. Nobody could dream of saying that all the piers of Waterloo Bridge are in a shattered condition. But in spite of scour and subsidence, the witnesses upon whom I rely will argue that the condition of the bridge to-day is remarkably good. What is the true test of a pier being in a shattered condition ? The courses of the masonry of these piers are to-day horizontal. They have maintained their original alignment as set out by Rennie. That is the real test of stability."

Lord Crawford did not neglect to use the arguments and the actions of the authorities responsible for Waterloo Bridge against themselves. He pointed out that they did not hesitate to use the bridge as a factory for assembling the heavy steel girder which forms the large span of the temporary bridge ; he reminded the Commission that the whole weight of the steel span was for a time supported entirely on the cutwater which these authorities deemed had completely failed. He went on to refer to the quality of the granite used in these words :

" Now as to the granite and as to the material of which the bridge is made. Mr. Wilson, an engineer who has made a particular study of strengths and resistances of stone, will offer evidence as to the actual quality of the stonework.

We shall argue, and we hope prove by our crushing tests, that the samples are more than adequate to carry the stresses imposed upon them. There never would have been a suggestion to destroy this bridge if it had not been for the effect of scour."

Having dealt with this point, Lord Crawford continued with reference to the causes of the sinking in the piers, explaining how the scour of the river was the source of the trouble, and pointing out why this had so much increased since Rennie's day. He went into close detail when he referred to the means by which the bridge could be maintained, explaining in a manner which any layman would understand how the foundations could be strengthened to effect this. He made it clear that the engineers who had been engaged by the Society for the Protection of Ancient Buildings gave advice according to their convictions and that they were prepared to modify their conclusions should new information make that desirable. He said :

" Please let me make this clear, that these engineers, who are all experts, are quite prepared to consider arguments that such and such a depth of foundation should be modified or that such and such a treatment of the superstructure is desirable ; there is no *parti pris* ; all they are out to do is to produce the most economical, the safest and the best conservative scheme for the bridge, and if the Commission have any doubt they obviously can ask contractors for their opinion ; a very short period, considering the amount of available data, would suffice."

But Lord Crawford is too wise a man to over-emphasise one side of a question. He quickly turned from the structural to the traffic problem. He said :

" Now as to the traffic. The proposed widening of Waterloo Bridge seems to assume, apart of course from the technical question of underpinning, that this is a bridge problem. There is no real bridge problem in London, but *there are many approach problems*. Putney Bridge, we hear is to be widened. It is no earthly use widening Putney Bridge unless you revolutionise its tiresome approaches. It is scarcely an exaggeration to say that if the bridgeheads were free, two-line bridges could almost

meet requirements. The reason is simple ; it is because no vehicle stops on a bridge or picks up or sets down on a bridge ; no vehicle turns on a bridge; it is not impeded by cross-traffic, either pedestrian or vehicular, and that is why there is never a policeman on duty on a bridge. That, again, is why there is surplus space, reserve traffic capacity on all these bridges."

He went on to point out that it is not statistics of traffic on the bridges that is needed nearly so much as the statistics for the approach roads. " That," he said, " is the thing that matters."

He went over all the arguments which had been used in the attempt to prove that a wider bridge was needed where Waterloo Bridge now stands, and laid a good foundation for the technical experts who were to follow him in showing that to spend money in getting more cross river roadway here would be to spend it wastefully. He claimed that the money that is available should be devoted to a new bridge at Charing Cross, but before coming fully to the arguments for this he gave some time to considering the claims made for building a new bridge near St. Paul's Cathedral.

About this he said :

" The promoters of the St. Paul's Bridge Bill can never have quite made up their minds whether they wanted the bridge for through traffic or local traffic, or else, if they tried to combine both objectives, their compromise will fail to attain either.

They say : " We have got money ; let us build a bridge with it." They do not ask what the traffic justification is, or how they are going to use the bridge. On the Surrey bank it is only 270 yards from Southwark Bridge ; it joins Southwark Bridge approach 400 yards from the river bank at Southwark Street. There are fifty yards or thereabouts between those two bridge heads. That makes a very poor corner. If traffic existed to justify these twin bridges, you would create and new and serious focus of congestion at that point. But Southwark Bridge is notorious for the paucity and the rarity of its traffic. Sir Henry Maybury says, " I see no possibility of making it more attractive." He says, " The bridge is extremely disappointing." Beneath these mild and measured words we can read that the bridge is a perfectly hopeless, irredeemable failure. It really is an astonishing spectacle of calm and of solitude in the midst of the busy world of the City. Is St. Paul's Bridge going to be more serviceable ? Is it going to make Southwark Bridge even more desolate ? Does Southwark Bridge really require a bye-pass ? That is what St. Paul's Bridge is going to be.

Now, if the City Corporation had been the sole bridge authority for London, it is unlikely that they would have constructed a bridge where Southwark Bridge now is ; still less would they now recommend a second bridge cheek by jowl to it. If money has got to be spent in the City, it might be devoted to making Southwark Bridge serviceable by providing approaches ; but the real need of London lies elsewhere. As things are the hands of the City are tied ; they operate under limiting statutes and trusts ; their difficulties in a way are analogous with those of the London County Council. I very much sympathise with both these great public authorities in the difficulties they have to surmount. I hope I shall not be considered disrespectful in saying that I wish the City would take the initiative in coming to the rescue of Greater London."

Finally, Lord Crawford ceased from criticising the proposals of the various individual authorities and turned to constructive suggestions. But the word " criticism " must not be taken to suggest that Lord Crawford spoke with any animus, for, whatever his feelings in the matter may have been, his argument was courteous, studiedly detached, one might almost say planetary, the reasoning was so disinterested. When he did turn to a constructive policy it was to advocate the building of a new wide bridge at Charing Cross. He said :

" What we want really is an outlet southwards via Charing Cross ; that would help Waterloo traffic ; that would help Westminster traffic—all the traffic which most conveniently comes down via St. James's Street, the Haymarket, and Trafalgar Square. Charing Cross Bridge would relieve Wellington Street blockade ; it would ease this bridge here, and widening Waterloo Bridge will not make Charing Cross unnecessary. People are generally agreed that if a bridge were built at Charing Cross and Waterloo Bridge repaired at its present width, traffic requirements could be met for thirty years ; I think for very much longer. But all this time Charing Cross is crying for relief ; that is where relief will be most fruitful ; that is where it is most wanted. Everything turns and hinges upon Charing Cross.

Charing Cross Bridge is the supreme need of London, and we say this even if more passenger traffic is carried underneath the river. A further advantage from our point of view would be that it would save Waterloo Bridge. We should avoid the risk to St. Paul's Cathedral and any creation of fresh City congestion at St. Paul's."

After Lord Crawford had finished giving his evidence he answered questions put to him by Lord Lee, the chairman of the Commission, and left the witness chair to the engineers who through the S.P.A.B. have been advising the Conference of Societies.

THE PROPOSED ST. PAUL'S BRIDGE.

PROOF OF EVIDENCE OF MR. ARTHUR KEEN.

Mr. Arthur Keen, Vice-President R.I.B.A. and Chairman of the Conference of Societies on whose behalf Lord Crawford gave evidence on 18 September, appeared before the Commission on 5 October. His Proof of Evidence was as follows :—

I have read the Proof of Evidence of Sir Banister Fletcher, who is a member of our Conference, and it conveys the views of the Conference except in matters relating particularly to the City which are outside our scope.

I wish to speak especially about St. Paul's Cathedral, both in relation to its structure and to maintaining the dignity of the most important building, with perhaps one exception, that we possess.

It is difficult to ascertain what is actually wrong with the fabric ; opinions of those who have studied it very carefully differ very much ; but the masonry of it is full of cracks and settlements, and in the case of Waterloo Bridge cracks of far less significance are held to show that the piers are " shattered," and must be taken down and rebuilt, even though the bridge is one of the finest examples of masonry in the kingdom. In the case

of St. Paul's the defect is being remedied by injecting cement into the interstices and inserting metal bars. Presumably this is found sufficient to insure stability, but the difference of view in the two cases is very disquieting, and certainly we are free to form our own judgment where authorities differ very much. I have had two opportunities given to me of seeing from the scaffolding what is happening to the piers of St. Paul's. The Cathedral was built in great part of old stones saved from the mediæval cathedral, used as rubble stone and faced with dressed Portland stone. The result of this is unequal resistance to strain, and the facing stone has come under enormous pressure. I have seen places where it has spalled off in great pieces two or three inches and more in thickness. I have seen numberless places where such defects have been repaired with new stone, and many places where the stone is found to be hollow at the back and ready to come away. The quantity of cement that is being used is clear indication of the extent of the cracks and voids in the masonry. In our view this is a condition of things in which vibration is a great danger, and we regard it as a very serious thing that a stream of heavy traffic should be brought against the east end of the Cathedral—a definite danger. Mr. Davidge pointed out to your Commission that vibration operates in unexpected ways, and is, in fact, not very well understood. It is a curious fact that when Piccadilly Tube was formed, vibration was felt at the backs of the houses rather than at the front, although the backs were more distant from the tunnels. In a letter to the *Times* of 24 April 1924, Mr. G. W. Cobbe, who made borings in the soil under the Cathedral, deals with this question, and I attach a copy for the use of the Commission. I am aware that it is proposed to have a footpath 15 ft. in width against the east boundary of the Cathedral, but such a space as this is scarcely worth discussing. The ideal should be something approaching to a Cathedral Close. The traffic about the Cathedral has increased so greatly in volume and weight that out utmost effort should be directed to securing an abatement of it, if possible, and certainly to preventing any further extension.

I am familiar with the road that runs north from the Cathedral: Aldersgate Street and onwards through Islington, Holloway and Highgate to Barnet and the North. The traffic on this road has increased enormously in recent years; it is in very great part heavy traffic, and I can see no chance whatever of anything but continued increase. To bring this traffic to St. Paul's Cathedral would, in our view, cause immediate and ever-increasing danger to the Cathedral. I believe that the time will come very soon when the police will have to control traffic far more than at present, and there are two points on this road where traffic could well be diverted to a bridge at Charing Cross in order to by-pass the City altogether. The first point is at the Archway Tavern, at Highgate, where Junction Road runs off through Kentish Town directly to Charing Cross, and the second is at the Nag's Head, Holloway, where Parkhurst Road forms the continuation of Seven Sisters Road, which in turn comes from Herts and Essex. Parkhurst Road joins up at Camden Town with the road from Highgate to Charing Cross. From the Archway Tavern to St. George's Circus, in South London, it is exactly the same distance by this route over a Charing Cross bridge as by Aldersgate Street and a St. Paul's Bridge. I think one route is as good as the other for general traffic purposes. (The distance is five and a half miles.) In a similar way traffic to the South-east could be drained away at Highbury by the New North Road and Hoxton to the Minories and Tower Bridge. In this way the need for a bridge at St. Paul's would be met to an extent.

I am asked to speak very emphatically about the architectural aspect of the matter. It is so important that I submit that the traffic question cannot be settled without reference to it. There is no question about the hold that St. Paul's Cathedral has on the imagination of the public generally; recent history shows this plainly; it is appreciated as a very noble building by all, and its position in relation to the national history and life seems to be clearly understood. What is not so clearly understood is that the setting of a building is almost as important as the building itself. It has the same relation to a building as the frame has to a picture: adding to or detracting from its effect and completeness. Durham Cathedral with College Green made into a football ground would lose a great part of the serene dignity that, more than anything else about it, impresses us, and precisely the same argument applies to St. Paul's. There is nothing fanciful or merely sentimental about this; it is a definite fact that lies at the root of architectural design—the sense of fitness. If a building is valuable for its beauty it is mere folly to injure it by vulgar or unfit surroundings, or by heavy and noisy traffic; and one is surprised that the City authorities, mindful as they are of the amenity of the City, should seem indifferent in this matter. Reference has already been made by Lord Crawford to the way in which the proposed bridge ignores St. Paul's Cathedral; refuses the axial lines; shirks it, in fact. The line of road, as planned, will be aimless and lop-sided; the building developments which will follow the construction of the bridge and its approaches will have no relation in design to the Cathedral, and presumably no subordination to it. The scale of the Cathedral may suffer immeasurably by the proximity of towering structures of unsuitable design.

The surroundings of St. Paul's, as we know them at present, are haphazard and casual, but not especially aggressive in point of height. At any time the whole aspect of them may be changed, and great injury caused to views of the Cathedral, which at present possess extraordinary beauty and grandeur.

Wren planned for a generous provision of space about the Cathedral, and order and distinction in the arrangement of it. This space could not be given, and we cannot point to anything that has been done in this age towards attaining Wren's ideal; the present Act gives no power of controlling the buildings that may be erected on the east of the Cathedral if the block of buildings next to Old Change is removed, and I gather that even this, including itself, is not assured.

It is not merely the concern of the Dean and Chapter as the constituted guardians of the building; the public

interest is concerned in securing and safeguarding in every way a very great national possession. Using words similar to those applied by Mr. Norman to Waterloo Bridge, I would say : " if it be possible by any means " to secure so beautiful and famous a public monument from injury by adopting other means of transit, it is our duty to adopt such other means.

THE PROPOSED ST. PAUL'S BRIDGE.
SIR BANISTER FLETCHER'S EVIDENCE.

On 5 October Sir Banister Fletcher, Vice-President R.I.B.A. and a Member of the Court of Common Council, represented the views of the members of the Common Council who are in opposition to the proposed Bridge.

His objections summarised are as follows :

(1) Town planning and traffic objections.
(2) Financial objections.
(3) Æsthetic objections.
(4) St. Paul's Cathedral.

Under No. 1 heading. He said that the bridge was not proved to be necessary, and that it would drive a wedge through the trade of the City which would do incalculable harm ; that it would provide a corridor right through the heart of the City, and would be intended to attract north and south traffic, which does not belong to the City, in order that such traffic may take a short cut from south to north London, which would be contrary to the principles of all town planning authorities, and to those carried out by the Ministry of Transport, for, throughout the country on all main roads " by-passes " are being made to carry traffic round the towns and not through them. The proper method of relieving north-south traffic would be by way of Blackfriars Bridge, the Tower Bridge and Vauxhall Bridge, all of which, according to Sir Henry Maybury, were not carrying their full capacity.

After dealing with the financial objections (No. 2) Sir Banister dealt with the æsthetic objections (No. 3), pointing out that the proposed bridge over Upper Thames Street and Queen Victoria Street, connected by some fifty vaulted tunnels—some measuring 30 feet high and 65 feet long, would result in a second insanitary area of the City—*i.e.*, a veritable slum similar to that of the viaduct from St. Paul's Station to Holborn Viaduct Station. The new scheme would spoil the eastern end of Queen Victoria Street, which probably forms the most imposing entrance into the City of London. The iron bridges over Upper Thames Street and Queen Victoria Street as designed, resemble the existing iron bridge by St. Paul's Station, and are hideous, with no architectural expression.

No. 4, St. Paul's Cathedral, Sir Banister said the most vital of all objections were the possible and unknown risk to St. Paul's. The Cathedral authorities, including Mr. Mervyn Macartney, the surveyor to the Cathedral fabric, contended that the underground work for the substructures in connection with roads and viaducts, right up to St. Paul's Churchyard would threaten the foundation of the Cathedral by tending to drain off the water under the " pot-earth " on which the Cathedral stands, and thus cause disturbance or subsidence. The possible danger to Wren's great masterpiece was so insidious, hidden and incalculable in extent that we should definitely refuse to run such a serious risk, so long as there was a substantial amount of expert opinion against thus incurring such responsibility for the future of the Metropolitan Cathedral. . . . The proposal of Sir Henry Maybury to form a " circus " at St. Paul's Cathedral would probably involve the demolition of buildings on the north side of the Cathedral, and would mean that the Cathedral would be encircled with heavy traffic, an appalling suggestion.

The Royal Fine Art Commission had moreover unanimously pronounced against the scheme.

Elements of Design & the Teaching of Building Construction

CONFERENCE OF TEACHERS AT THE R.I.B.A. 21 JULY 1926.

BY PROFESSOR A. E. RICHARDSON [*F.*]

I. The Attitude of the Teacher.

NEVER at any time in history has there been such need for revision of theories of building. Architects and teachers especially are fast losing control of the wider issues of architecture. This truth, all the more serious in view of increased educational facilities, demands investigation.

Putting aside all predilections for the masterpieces of the past, of the integrity of which we are in agreement, there remains the adjustment of the technical side of building to the conditions of the moment and the future. We will not waste time discussing the merits of style, nor argue about points which are controversial and have no definite bearing on the subject before us.

Building can be classified under three groupings; these are respectively civic, domestic, and ecclesiastic. At present most buildings are either one or the other of two things: (*a*) copybook studies of old work, (*b*) masses of material crudely arranged. There is very little fine building.

To meet the difficulties of combining art with science those who have specialised in the theory of construction have collected data relevant to known forms of construction, the idea presumably being to record the minor components used in building practice, as well as to offer precedents on a generous scale. We have, therefore, the spectacle of a mock system of architectural style totally unrelated to the system of construction now in vogue. It is not going too far to say that architecture to-day does not express the realities which surround us; it is non-vital in the sense that it lacks anatomy; it is decoration held in place by construction that is purely adventitious. Put briefly, constructors have been obsessed with the idea of providing a universal system of construction.

There are signs that the old order of things is being slowly relegated in favour of methods which are more logical. It is becoming clear that construction must be taught as a branch of science intimately related to art. It is indivisible from art.

The architectural stylist begins with a pictorial conception of the building he is called upon to design; he fits a plan to his picture and proceeds to the details of construction. The result is far from convincing. It is only fair to say that some extraordinarily good buildings have resulted from such copybook methods. But at best this procedure is style exploitation.

Fine building, on the other hand, belongs to a different category. In the first place, it demands that all the parts of a fabric are sequential and harmonious. Because the plan has structural anatomy, the sections and the elevations are in sympathy. Under this system the attributes of construction, always subordinate to the building as a whole, are inherent in the volume of the spaces, as they are in the disposition of the walls. The building becomes reasonable in its expression by virtue of the requirements and their adjustment to a distinguished sense of structural art. You will observe that selected style has not been mentioned; neither has construction been referred to except as a subordinate issue. It is not possible within the time at our disposal to do more than discuss one phase of the subject. If we deal this afternoon with domestic architecture alone, we shall gain a view-point which must lead to a proper estimation of the other branches into which architecture or building is divided.

There has been a considerable advance in recent years, particularly in the development of houses for the people. We have the evidence of the Government housing schemes, of such communal centres as Welwyn, Dormanstown, and other places. The standard of living has improved, comforts have increased. But the advancement, good as it is in some particulars, has been accompanied by horrors which threaten the amenities of the countryside. Shoddy construction and false economy have, in the main, been responsible for the retrograde movement.

We are living in an age when the true principles of building, save at the hands of a few architects, are almost totally ignored. The good work is overshadowed by growths which are pernicious and distressing. The task before the teacher is an enormous one. How, for example, is common building to be controlled? Is it within the power of a few individuals to reinstate a building vernacular which will be honest and pleasing in its varied expressions?

We are up against the demon of snobbery and the devil of unrest. The mass of the people do not understand tidiness. They are opposed to restraint and simplicity. The old England of our forefathers is being subjected to indignities which spell ruin, and no amount of loose art talk will stem the tide.

But you have not come here to listen to a jeremiad. The first suggestion to be made is the immediate need to improve existing methods of teaching construction.

No matter from what class the students are drawn, the best results can be achieved by relating the theories of construction to actual building schemes. There should be a closer reference to plans. Not only should

students be encouraged to a knowledge of bricks, timber, tiles, and masonry, but examples of contemporary planning should be taken as illustrations of building practice at its best. Every school should have a set of architects' plans for reference. There should be exercises in assembling masses of materials. Lectures should be given on the right way to treat finishings, and these talks might be accompanied by illustrations of examples of building which in every respect were beyond reproach. These methods have been followed at the Central School of Arts and Crafts with good results. This first point might be summed up as the fulfilment of the theory of construction—namely, cause and effect.

II. The Observance of Regional Characteristics.

There are teachers in this room from every part of the country. Most people are aware that every county in England during the past four hundred years has evolved building traits, especially in domestic work, which are purely local. In other words, the right use of local materials has produced a vernacular suited to the district. The railway upset this pleasant evolution, and that which the railway left unspoiled is now endangered by the employment of substitute materials.

The use of local materials must be more closely observed. In this the past offers many lessons. There is no reason to be slavish and to indulge in copybook exercises. The broad principles alone need consideration. It is unfortunate that the ordinary treatise on construction ignores such essentials.

III. The Logic of Structural Planning.

The plan is the determining factor in teaching the elements of design and construction. It has been argued that we know everything that is to be known about structure. But do we? There is so much crude building as to cause doubt. If teachers of construction go about their several tasks in the right way, they will lead their men to think of planning and construction as providing the very fibres of fine building. Let them begin with simple exercises, constructing circles, squares, and octagonal forms in brick, stone, or timber. Let the student follow on by roofing these geometrical figures and so proceed to combinations of forms. If a student plans and details the construction of one small house during his term of studies, he will have gained a better idea of the theory of building than another who prepares an endless number of plates of constructional details. Here, again, lectures on the great buildings of the past, describing the anatomy of the plans, will be of the utmost value.

IV. Fine Building.

The aim of teaching construction is not wholly achieved if the issue of distinguished building is ignored. Do not run away with the idea that this term implies grandiose architecture. Remember we are discussing domestic work. By fine building is meant work which is humane, orderly, reasonable, and economical. How often is a wall considered merely as a wall, a window as a glazed opening, a doorway as an entrance, without regard to the grouping of these parts or their relationship the one to the other? Ornament, bay windows, top-heavy chimney caps, and awkward roofs do not make for finesse in building. Neither could we consider plate glass, glazed brickwork, or Welsh tiles out of their proper environment. There is no better illustration of crude building than that offered by the advertisement page of the *Evening News*, which on occasions reveals a hundred crude cuts of hideous bungalows and treacherous houses for the enticement of the unsuspecting.

V. Grouping and Amenities.

Teachers of construction must not consider their duties complete unless attention is given to the elementary principles of grouping. Every teacher should be a town planner. His conception of the structural system should apply to the arrangement of houses in groups. He should preach to his men, who will be builders in the future, urging the necessity of building on sites away from main roads leading into towns. He should dwell on the importance of preserving local landmarks, and should encourage his men to regard the grouping of houses and cottages as a high moral responsibility. This idea is capable of many interpretations. It is part of the theory of design and construction. It has been successfully pursued by municipal authorities and private owners. But notwithstanding good examples, as far as legislation goes to-day, the most beautiful spot in the country is at the mercy of any carpenter or amateur builder who is bent on emulating a design from one of the current technical papers.

VI. Pride and Simplicity.

The question of snobbery has already been touched upon. People like to imitate that section of the social strata which they consider immediately above them. Thus the wife of the clerk likes a bay window because the bank manager's wife has a bow window. Hence houses with bay windows facing one another, the endless gable rows, the absurd railings and the insanitary front garden. When, as at Welwyn, the houses are kept simple it is not the artisan who looks upon the result with favour, but the highbrow fraternity. How different things were a hundred years since! Then there were few ugly cottages. You will begin to agree that design and construction include the consideration of pride. We desire building, as a structural art, to level things up, not to degrade things to a common level. Many a shoddy nest of cottages recently erected in every county is foredoomed to become a country slum within the

next decade or so. People have no real pride in shoddy building.

VII. The Value of the External Qualities of Old Work as a Guide to Modern Expression.

The eye is the small circle that takes in effects. We receive many impressions subconsciously. It is clear that whether we acknowledge our indebtedness to the past or not, we are continually being influenced by its internal evidence. The danger is that some fall in love with the past to such an extent that they become Mediævalists or Georgians. Then we have artists skilled in faking and reproducing. In some ways architectural practice to-day is strangely akin to the trade which flourishes in the Tottenham Court Road and elsewhere. There are others who are blind to the past. They have no idea of its values, of the pale tints which pass for commonplaces, of the minutiæ of history which colour the intricate tapestry. Ruskin once made an illuminating contribution to architectural theory—at least it was one of the few that reached down to our level. Referring to the plain stone houses of the Lake District, he said these belong to the true spirit of architecture. Old buildings exactly reflect the tendencies of the age in which they were produced. They carry the assay mark of Gothic, Tudor, or Classic. We are prone to admire them for their architectural character alone. But investigation proves the treatment of the material, the pitch of the roof, the weathering of the eaves, the local treatment of detail, to be of a more lasting order than the twirls and conceits of style. I am not going so far as to say that style does not blend with regional traits. The point I wish to make is that regional traits are superior to acquired style. Therefore the treatment of material in masses offers a constant which never becomes old-fashioned.

VIII. Craftsmanship and the Machine.

A hundred years since craftsmanship was general. Miscellaneous Birmingham goods, in spite of Messrs. Boulton and Watt, evidenced skill. Craftsmanship being common, few troubled themselves about it. Good work was expected from every workman. Most things were produced by hand.

The art of the Victorian age represented the gradual decay of the small craftsman. By the year 1851 the machine had gained the victory. Then followed the isolated efforts of Ruskin, William Morris, Philip Webb, and others to revive handicraft. You can have good craftsmanship to-day if you are prepared to pay for it, just as you can obtain rare fruits out of season. The newer craftsmanship belongs to the machine. It is precise in its parts and has a rigidity of expression in sympathy with this age. We have to admit the machine, and that means the suppression of the individual. Between the architect, with his drawing board learning, and the machine with its smoothing capacities, building in some manifestations has the quality of starched linen. Mr. Spooner, however, has shown us that joinery can be produced to-day the equal of antique work. It is still possible to get splendid bricks, and the treatment of stone is still understood. Allowance must be made for the vast scale on which building is undertaken to-day. Teachers must explain the difficulties to their students and tell them that building does not finish with the drawing board. My advice to you is, in spite of the machine, do not let your regard for craftsmanship die out. The men who work on buildings need gingering up. It would be a little unusual for an architect to-day to assemble the workmen and explain his building to them, and to ask for their co-operation in every part. But this, you will agree, is what is wanted.

IX. Standardisation of Detail.

Contrary to expectation, this is a good quality. All the great periods of building have been noted for the uniformity as well as the excellence of the detail.

If we study the 18th century, early, middle or late, we shall find the joinery of each period standardised. The six-panelled door introduced by Inigo Jones remained as a constant form of design from the time of Charles the Second to the middle of the 19th century.

Joinery of standardised design was at its best at the end of the 18th century. I have never seen better joinery than that worked for Sir John Soane and Henry Holland. Standardisation as a principle admits of varieties which give piquancy and individuality. Now is it not strange that most books on construction avoid this issue? Some of the early editions of Rivington were fuller in this respect. Some writers on the subject of construction have been so eager to meet current fashion that they have evolved a system foreign to the best principles of building. Their views are polyglot. Here I know I am on very dangerous ground.

X. Reproduction of Period Work to be Avoided.

This point has already been partially dealt with. Construction does provide a key for advancing the character of joinery, masonry and brickwork, as it does for design in general. Essentially is this the case when the modern conditions of planning are observed. "You are not debarred from studying old work, but don't stage it; otherwise we must all dress in costume."

XI. The Revival of the Apprenticeship System.

No trade can expect to flourish without a constant supply of recruits. The building industry, the oldest in the world, takes in by far the greatest number of unskilled people. Guilds, polytechnics and other teaching centres in large towns have done much to remedy the evil. In the remote country districts the

apprenticeship system has almost died out, with the result that the stream of young artificers who formerly came into large towns for work has practically ceased. Boys prefer to become fourth-rate clerks or shop assistants rather than lose esteem by learning a trade. Teachers of construction have it in their power not only to train men in the subject of construction, but to advise on the nature of a calling. A boy equipped with theoretical knowledge will make a better artificer if he combines his school work with the handling of tools. Here is a point worthy of the attention of the T.U.C.

XII. The Social Aspect.

If building generally was good when the population consisted of 12 millions, why does it fail to please when the population is 40 millions? Here is a subject for the Institute Essay Medal. I do not pretend to be in a position to answer the question.

If we could succeed in leading opinion to a fit sense of what good building is, this country would in every way be better.

The standards of living have changed: people are well dressed to-day. It is hard to distinguish the shop girl from the lady of fashion. It is rare to find youths in town or country without respect for their appearance on Sundays. But the standards that apply to an appreciation of clothes are not considered when houses are in question. During the last decade there has been a notable advance in design where the building of new houses has been controlled by expert advice. But we have been faced with an evil as bad as the efforts of the speculative builder a quarter of a century since. You will at once think of the small cottages and bungalows in your districts. What a reproach to our so-called civilisation such things are!

XIII. Co-operation of Building and Financial Interests.

Regarding small property, collective effort was to be preferred to individual enterprise. The old system which permitted a carpenter working with a fourth-rate solicitor to become a man of property was not extinguished by the war. It is true we do not suffer quite so acutely from catalogue building, but on the other hand the rise of cost has brought forth other evils which are just as bad. Builders to-day are not prepared to build houses for wise men to live in. Municipal enterprise is a good thing. The example of the London County Council is to be admired. People are so busy looking after their daily bread that they are forced to let others think for them in all questions of housing. The main issue is the control of designs. I submit that the local authority, often advised by local surveyors and engineers, does not fulfil all the obligations required. The drainage may be good, but the pictorial effect is anathema. Although you may control taste by training workmen, you cannot entirely influence public freedom, which is at the mercy of every wind that blows.

XIV. The Communal Sense.

As we touch on these points so we begin to see how they are interrelated. Like craftsmanship, old village life is giving place to a fusion of interests which breaks down local boundaries. Each new development, whether in the suburbs of London or of any great city, represents an attachment of interests rather than a new village in embryo. It is like the design of a patchwork quilt in which fragment is added to fragment without regard to intrinsical design. Very often new centres are planned without shops or any other interest than the houses. There is, moreover, no consideration given to space for legitimate expansion. Surely it should be a distinction to live in a new centre, and not merely a penance to be attached to another collection of streets. Such developments, considered largely, should all form part of the system of reform.

The best of the small houses which can be termed modern are distinguished by reasonableness. They are neither over-grown cottages nor arty essays in material. At Welwyn the regional characteristics of Hertfordshire have been followed. The houses are simple, the windows justly proportioned, the doors object-lessons in simplicity. The detail has been standardised. In addition some of the houses have been grouped in threes on terrace lines which have novelty. I have an especial liking for Welwyn because its expression as a community centre is unaffected; moreover, for teaching purposes it is an example of how design and construction should be blended.

XV. The Banning of Bungalows.

We can say of this form of building as the Cornish fisherman remarked about pilchards: "When they are good, they are only middlin', and when they be bad they are horrid."

In the first place the Englishman does not like to sleep at the ground level. The foreigner does not mind. Secondly, a bungalow is just as costly as a two-floored cottage. Thirdly, it is vile because it admits of substitute materials. You are all familiar with the cabins in Ireland, the toll houses on the roads, and the lodges to noblemen's parks. Under certain conditions these small one-storeyed dwellings have a charm. But a village of such contraptions, displaying fifteen acres or so of substitute roofing, in the Cotswolds, in Westmorland, Yorkshire, or any other part of the country, when local material can be had in abundance, amounts to an abomination.

To conclude, we have to discuss the broadest issues, to free our minds of academic learning, to avoid the jargon terms of architecture and to deal with realities. The fact that we desire to better things means that improvement is within reach.

BOOKS ILLUSTRATING THE EXHIBITION OF DECORATIVE ARTS, PARIS, 1925.

There is a striking diversity of opinion as to the merit of the buildings and exhibits that composed the Paris Exhibition of 1925, but its importance as a symptom can scarcely be questioned. The extent of the interest aroused is proved by the number of works on the subject issued by publishing firms in France* and elsewhere, and of these the R.I.B.A. Library now possesses a fully representative selection.

Bâtiments et Jardins[1] forms the most complete general record of the exhibition. It is a bound volume of one hundred excellent photogravure plates prefaced by an essay by M. Roux Spitz and series of descriptive notes and plans. Nothing of any moment, interiors apart, is missing, and though gardens form a relatively small part of the whole, they are not the least interesting section. But the very urban site of the exhibition did not provide much space for gardens, *qua* gardens, and the most valuable lesson provided was the skilful use of shrubs and flowers as part of the considered decoration of buildings. A telling example of this was the green cresting of the pavilion of the Galeries Lafayettes, which was equally valuable as form and as colour.

L'Architecture Officielle et Les Pavillons[2] is one of a pair of portfolios of plates. The subjects are selected by M. Patout, and the first is devoted to the national contribution to the exhibition, and includes such important works as the interior of the Grand Palais and the theatre of the Perret brothers. The second, which I believe the library possesses, deals with the Foreign section, and together the portfolios provide the cheapest adequate record of the exhibition which is obtainable.

Ensembles Mobiliers,[3] second and third series, and *Interieurs en Couleurs*[4] serve as a complement to the previous volumes. The first mentioned are folios, each containing thirty-two photogravure plates arranged by M. Maurice Dufrene, who contributes an essay of which the theme is the *ensemble*. This collaboration of artists and craftsmen for the achievement of a unified impression was, to many, the most notable success of the exhibition, and while that impression was in many cases too powerful for British tastes the technique that produced it is well worthy of study and record. Colour, which played so important a part in these interiors, is difficult to register accurately, nor are the fifty plates in the second volume colour photographs. But as watercolour impressions of the designers' intentions they fill a gap and supplement the photographs and as studies in colour they are in many cases delightful. The grand salon in the Ruhlman house with its blending of greys, blues, mauves, browns and reds is masterly, but such delicate colour as the pale gold dining room of Lalique has defied the skill of the draughtsman.

The more specialised aspects of the exhibition are not neglected. *Devantures, Vitrines, Installations des Magasins*,[5] by René Herbst, covers the very important contribution which the exhibition made to the art of displaying goods. Specially notable in the shop front designs illustrated is the scale relation between articles displayed and their setting. The intrinsic charm of the shop is rarely allowed to steal the interest from the goods, though some of the ironwork of the doors and screens is in itself admirable. This branch of design is dealt with in *La Ferronerie Moderne*,[6] by M. H. Clouzot, and it seemed to many of us that French craftsmanship was here shown at its best. The superb work of such artists as M. Edgar Brandt is now too well known to require comment, and there are few of the thirty-six plates in this portfolio that do not provide some inspiration.

Finally, there is M. H. Rapin's *La Sculpture Décorative Moderne*,[7] which is not entirely concerned with the work of the exhibition. It deals chiefly with the more architectural and decorative types of sculpture, and none of the examples shown is of the "extreme left." They range from the serious work of Bourdelle through the beautifully cut stonework of Binquet to the lighter decorations of Sue et Mare, and they display a vitality and interest that are far removed from the prevailing dullness of so much of the sculpture of this country.

JOHN MURRAY EASTON [*A.*].

*French Books: *Exposition des Arts Décoratifs, Paris*, 1925.

1. *Bâtiments et Jardins*. M. Roux Spitz. Edition: Albert Lévy, Paris, 1925. £2.
2. *L'Architecture Officielle et les Pavillons*. P. Patout. Edition: Ch. Moreau. Paris. 15*s*.
3. *Ensembles Mobiliers*, 2me and 3me Séries: Maurice Dufrene. Edition: Ch. Moreau. Paris. £1 10*s*.
4. *Intérieurs en Couleurs*. Preface par Léon Deshairs. Edition: Albert Levy. Paris. £2 6*s*.
5. *Devantures, Vitrines, Installations de Magasins à l'Exposition*. René Herbst. Edition: Ch. Moreau. Paris. £1.
6. *La Ferronerie Moderne*. H. Clouzot. Edition: Ch. Moreau. Paris. 16*s*.
7. *La Sculpture Décorative Moderne*, 1ère Série. H. Rapin. Edition: Ch. Moreau. Paris. 15*s*.

Correspondence

BROADCAST CRITICISM.

21 *Suffolk Street, Pall Mall East, London, S.W.*1.
22 *September* 1926.

To the Editor, JOURNAL R.I.B.A.

SIR,—After listening to Professor Reilly's condemnation of the new Regent Street "broadcasted" last week, I suggested to the B.B.C. that, in justice to those responsible for the new buildings, some defence of this achievement should receive equal publicity.

Replying to this suggestion the B.B.C., while admitting that there may be many arguments which could be produced for "broadcasting" views divergent from those expressed by Professor Reilly, regrets that time is unavailable for further discussion on this subject.

It is, in my opinion, greatly to be deplored that the exceptional publicity effected by wireless should be employed for the purpose of influencing, in one direction only, public opinion upon debatable matters, and I therefore suggest that the B.B.C. be requested by the Institute to broadcast a defence, by one of its members, of the new Regent Street.—Yours faithfully,

JAMES RANSOME [*F.*].

Somers Clarke

SURVEYOR TO THE FABRIC OF ST. PAUL'S CATHEDRAL.

BY MERVYN MACARTNEY [F.], F.S.A.

By the death of Somers Clarke the select band of architects trained under the old system of master and pupil has sustained a heavy loss. He and his partner, J. T. Micklethwaite, were contemporaries in Sir Gilbert Scott's office, together with Street, Sedding, Niven, Stevenson, Bodley, Sir Thomas Jackson and a host of other men who distinguished themselves in architecture and whose influence has extended down to the present day. They all had Gothic leanings, and throughout his life Somers Clarke never missed an opportunity of making critical allusions to Classic design and construction, his pet aversion being pilasters. His dislike was really illogical, as the Gothic designers used similar forms, such as engaged columns, for precisely the same objects—viz., to strengthen a wall or to break up a flat surface with shadow.

Somers Clarke was the son of a Brighton solicitor of eminence in that town and town clerk for fifty years. He was meant to follow his father's profession, but quickly deserted the study of legal intricacies for the pen of the draughtsman. He did a great deal of church work in Brighton, which was then entering on a period of great prosperity.

His principal works were :

St. Martin's Church, Brighton. (A very fine design.)
Addition of two aisles and chancel to Parish Church, Brighton.
Restoration of St. Nicholas' Church, Brighton.
St. Mary's Church, Stretton, Burton-on-Trent.
Church of St. John the Divine, Gainsborough, Lincs.
Reid's Hotel, Madeira.

He also did a considerable amount of domestic work, amongst his largest houses being " Sandrock," Hayward's Heath ; other houses are at Wargrave and Hildenborough.

He was a very complete church architect. He knew all about the construction of an organ, and was himself no mean performer on that instrument. He represented a type of church architect now fast dying out ; he was a learned antiquary and a great ecclesiologist.

In 1900 he was appointed Surveyor of Chichester Cathedral and held this post until 1922.

In 1897 Somers Clarke was made Surveyor of St. Paul's Cathedral, and in 1900 his partner, J. T. Micklethwaite was made Surveyor of Westminster Abbey —a unique distinction for two partners. Their eminence in architecture as well as in ecclesiology made their selection appropriate. But troublous times for Somers Clarke were in store. Sir William Richmond had been appointed to decorate St. Paul's, and his adoption of mosaic did not meet with universal commendation. John Bentley, John Sedding and other members of the Art Workers' Guild rose in opposition to this scheme. They agitated incessantly and finally got the Guild to condemn the proposed extension of the introduction of mosaic decoration to the Dome, and it was largely through their action that the scheme was modified, and finally abandoned.

Somers Clarke's health obliged him to spend half the year in Egypt, and this led to complications in the execution of his duties. Micklethwaite was a very efficient partner, but difficult. In consequence trouble broke out over the electric lighting installation, the work in the Chapel of Saint Michael and Saint George, and the completion of the decoration scheme. He was unfortunate in having to deal with two martinets in connection with the Order of Saint Michael and Saint George, in the persons of Sir William Baillie Hamilton and Sir Montagu Ommanney. The former was an overbearing Scotsman connected with a ducal house, and the other a retired Royal Engineer, a man of meticulous exactitude. Eventually matters became so strained that Somers Clarke, whose health was already giving him some trouble, decided to resign from St. Paul's, and soon afterwards he retired to Egypt, where he was much respected as a capable, fair-dealing architect, who used his abilities to the benefit of native and foreigner alike.

He took an enormous interest in St. Paul's Cathedral, and did some very useful work there, notably in the resetting of the floor and roof of the west portico, in the asphalting of the cornices, and in drafting the regulations for interments in the Crypt. He also took down and reset the gable over the south transept, and at one time proposed to put a " straitjacket round the drum of the Dome." This is a much debatable subject, and one on which no conclusions have been arrived at. He was also responsible for the completion of the Stevens Memorial to the Duke of Wellington, by placing the equestrian statue on a pedestal on the top of the columns.

His recent correspondence shows that he would have been glad to have carried out considerable schemes of repair on the Cathedral fabric, but was deterred by lack of funds.

The decoration of the Chapel of Saint Michael and Saint George was a favourite occupation of his, and owing to the lack of space he found that a great deal of planning and compromise was necessary for the execution of any effective design. By far the most satisfactory work that he did at St. Paul's was the installation of the electric light. He took infinite pains over the details of this task, and many models were made for

him before the work was completed. It was carried out by Benson, of New Bond Street.

He also was a generous benefactor to the Cathedral, paying, for example, out of his own pocket for the railing on the main cornice. This is generally considered an error, as it destroys the profile of the cornice, but it is undoubtedly a great advantage for the workmen. The numerous letters received from him during the last thirteen or fourteen years show an absorbing interest in the history of the preservation of the Cathedral; and the continuous contributions which he sent in response to each of the three appeals issued on behalf of the work since 1913 are another instance of his generosity.

He died in Egypt, full of years, at the age of eighty-five. His friends will not soon forget his attractive personality—the vivacity of thought and style and the strong expressions of opinion which did not conceal his kindness of heart, his penetration, or his shrewd common sense.

Obituary

SIR CHARLES TAMLIN RUTHEN.

By Dr. Raymond Unwin [*F.*].

It was about 1907 that I first met Charles Ruthen, when visiting Swansea in connection with the plans for the layout and building of a cottage exhibition on the Town Hill estate of the Corporation; he was then keenly interested in the housing question, and to the end of his sadly curtailed life he maintained his zeal for the improvement of housing conditions for the people. The son of Mr. John Ruthen, he was born in 1871, and articled in due course to Mr. Matthew Hall, of South Shields. It was in Swansea, however, that he started practice, and he there carried out many buildings of diverse kinds. He became specially known in connection with hotel construction and remodelled several well-known London hotels.

During the war he rendered great assistance to the Government in the honorary and onerous posts to which he was appointed in connection with the invidious work of apportioning the inadequate office accommodation available among the ever growing number of new Government departments and fresh officials. In this work his expert knowledge of buildings and accommodation, combined with his great organising and business capacity, enabled him to do service of the highest value to the country, and led to his ultimate appointment as Consulting Honorary Chief Inspector of Government Accommodation. The value of his services in this and other directions was acknowledged by the knighthood conferred upon him in 1919. In April 1921, Sir Alfred Mond, the new Minister of Health, called him to the Ministry as Honorary Director General of Housing to help in giving effect to the changed policy in regard to housing which the Government then adopted. He again took up with zeal and carried out with great ability another task not less difficult and thankless than those he had wrestled with during the war. He retained this post until the illness which so sadly terminated his life obliged him to relinquish active work. Sir Charles Ruthen served on numerous Government Committees dealing with the cost and construction of buildings. He took great interest in special methods of building construction; and his call to the Presidency of such bodies as the Society of Architects, the Institution of Structural Engineers, and the Institute of Arbitrators indicates the extent to which his abilities and character were appreciated by those expert colleagues with whom he was associated in diverse fields of activity. A genial personality, he was a good colleague to work with, and his loss is widely regretted.

GEORGE WITTET [*F*].

By Jn. Begg [*F.*]

It is one of the harsh penalties of service in "Greater Britain" that a man abroad is almost invariably denied that authoritative recognition by the representative organs of professional opinion which is rightly enough valued by the sane and normal man. It is a grave defect of our system of British Architecture that, with all its many virtues, this evidence of over-centralization should be so marked a feature of professional life.

George Wittet went to Bombay in Government service in 1904. He has just died there after twenty years of brilliant work, during which he designed and carried out a vast number of major building projects. Their aggregate number and size would have made a practice for a Lutyens, a Lorimer or a Baker, with enough left over for half a dozen smaller fry, and I declare that in quality they are not inferior to the average of these great Masters of Architecture. Yet his name is hardly known. It does not appear in *Who's Who in Architecture*. He cannot have left much money, for his earnings were moderate. He had no "K" or other of the "honours" which fall in plenty on the just (and unjust) of Indian officialdom.

George Wittet served his articles in the office of Mr. Heiton of Perth. He then came to Edinburgh and was for a number of years associated with Mr., now Sir, G. Washington Browne. His southward movement had reached no further than Mr. Brierley's office in York when in 1904 I found him and took him to Bombay as my assistant. Three years later, on my own translation to Simla, he was appointed my "acting" successor, being confirmed "Consulting Architect to the Bombay Government" some months thereafter. In 1919 he gave up Government service for more lucrative work under one of the Tata schemes, but was induced to return to his old appointment about a year ago.

His chief works have been the "Gateway of India," the "Prince of Wales Museum of Western India," the College of Science, the Custom House, all in Bombay; the Agricultural College and the Central Government Offices at Poona, carried out by him after some measure of collaboration with myself in design. He has built

innumerable offices, court-houses, bungalows, flats, etc., etc., both in Bombay itself and throughout the Presidency, and his works, from their virile character and ability, have had an influence over the whole Indian sub-continent that has been equalled by the work of no other architect.

Wittet had an intuitive grasp of architectural requirements that amounted to genius, a fine sense of scale and composition, a never-failing but duly restrained invention, an immense appetite for work and, not the least important, an arresting personality that could sweep away difficulties, reconcile divergent interests and inspire the most lethargic with a spirit of enthusiastic co-operation. The tragedy of his death, while still under 50, is one of the most nearly commonplace of the events of his remarkable career in India.

THE STANDARD OF NATURAL LIGHTING IN TOWNS.

HORTON *v.* BEATTIE (42 *T.L.R.* 701).

The Judgment in the above case has not, I think, been noted in the JOURNAL. It would, however, appear to be of interest to architects in determining an important point which has hitherto left scope for considerable and sometimes expensive difference of opinion.

The case came before the Court for the not unusual reason that the owner building considered that his neighbours ought to put up with a degree of obstruction which had become fairly general in the centre of a busy manufacturing town, and consequently had disregarded their protests and proceeded with his scheme until stopped by Injunction.

From the wording of the Judgment it is obvious that there was little or no real conflict of technical evidence. The main defence to an allegation that the plaintiffs' premises would be left with insufficient light for ordinary purposes was that they would be no worse off than the majority of their neighbours.

From this counsel developed the customary defence that dwellers in towns must put up with the average conditions of the neighbourhood, and that an action for nuisance due to inadequate light could no more succeed in a crowded and overbuilt town than could an action for nuisance from smell succeed in the neighbourhood of the tanneries of Bermondsey or an action for nuisance for noise near the Clyde shipbuilding yards.

To this defence the Judgment is directly addressed. It declared that "the standard of lighting required to eliminate the existence of a nuisance was of necessity an absolute standard, as the human eye required the same light for reading or sewing in Wolverhampton as in Mayfair."

The case was reported briefly in the *Law Times* of 31 July last, and a long leading article upon it appears in the issue of the same periodical of 7 August.

Opinions may and undoubtedly do differ amongst architects as to the extent to which building in overbuilt towns should be restricted by the necessity for leaving minima of adequate light to neighbouring premises; but there can be no question as to the value of such a clean-cut decision upon one of the few moot points in the present law now left by recorded judicial decisions.

Building owners at least know or can ascertain more or less precisely where they are, and can frame their schemes accordingly. This is one of the greatest advantages of settled law laid down in careful detail in numbers of concurring and recorded judgments.

It would appear to be open to question whether it would be equally advantageous for all light disputes to be settled by arbitrators, who would presumably be bound by no judgments except their own opinion, whose decisions would be subject to no appeal, and would not be recorded or probably even reported.

One of the most fertile causes of all disputes between neighbours is uncertainty as to each other's precise rights.

PERCY J. L. WALDRAM.

R.I.B.A. ORDINARY GENERAL MEETINGS, SESSION 1926–27.

Mondays at 8 p.m., except where otherwise stated.

1926.

November 1.—INAUGURAL MEETING: "President's Address at 8.30.

November 15.—GENERAL MEETING: "Bridges and Traffic," by H. V. Lanchester [*F.*].

December 13.—GENERAL MEETING: "The Work of Leonard Stokes," by George Drysdale [*F.*].

1927.

January 3.—GENERAL MEETING: "Mosaics," by Boris Anrep.

January 17.—GENERAL MEETING: Award of Prizes and Studentships: Criticism by Robert Atkinson [*F.*] on work submitted.

January 31.—GENERAL MEETING: President's address to Students at 8.30. Presentation of prizes.

February 28.—GENERAL MEETING: "Organisation and Cost of the Building Industry in America," by Harvey Corbett [*F.*].

March 14.—GENERAL MEETING: "Modern French Architecture," by Howard Robertson [*F.*].

April 11.—GENERAL MEETING: "The Planning of East Kent," by Professor Patrick Abercrombie [*F.*].

May 16.—GENERAL MEETING: "Modern Hospital Planning": (*a*) "English Hospitals," by H. Percy Adams [*F.*]; (*b*) "American Hospitals," by Lionel G. Pearson [*F.*].

May 30.—GENERAL MEETING: "Devonshire House Buildings," by Thomas Hastings [*H.C.M.*].

A.B.S. SCHEME OF INSURANCE.

The Architects' Benevolent Society has recently negotiated the following insurances through its agency:—

£1,467—Deferred Children's Assurance.
£20,000—Fire risk on building in course of erection.
£25,000—Do.
£2,000—Home Protection.

Other insurances are in process of going through, and it is earnestly hoped that architects will give the Scheme their warm support in the coming Session.

SIR JOHN SOANE'S MUSEUM.

The museum will be open free on Thursdays and Fridays in October from 10.30 a.m. to 5 p.m., and in November from 10.30 a.m. to 4 p.m.

THE PRINCE OF WALES AND DOMINION ARCHITECTURE.

The Prince of Wales has graciously acceded to the request of the Council of the Royal Institute of British Architects that his name should be included in the list of Patrons of the Exhibition of Dominion and Colonial Architecture which is to be held at the R.I.B.A. from 19 October to 17 November.

In addition to His Royal Highness, the following have granted their Patronage to this Exhibition which will be opened next week at the R.I.B.A. :—

The Rt. Hon. L. C. M. S. Amery, P.C., M.P., Secretary of State for Dominion Affairs.

The Hon. Peter C. Larkin, High Commissioner for the Dominion of Canada.

The Rt. Hon. Sir Joseph Cook, P.C., G.C.M.G., High Commissioner for the Commonwealth of Australia.

The Hon. Sir James Parr, K.C.M.G., High Commissioner for New Zealand.

The Hon. J. S. Smit, High Commissioner for the Union of South Africa.

BOARD OF ARCHITECTURAL EDUCATION. R.I.B.A. ARCHIBALD DAWNAY SCHOLARSHIPS 1926-27.

In accordance with the terms of the will of the late Sir Archibald Dawnay, the Royal Institute of British Architects have awarded the R.I.B.A. Archibald Dawnay Scholarship of £75 for the year 1926-27 to Miss C. W. Preston, School of Architecture, Architectural Association, and the R.I.B.A. Archibald Dawnay Scholarship of £50 for the year 1926-27 to Mr. E. B. O'Rorke, School of Architecture, Architectural Association.

Mr. R. P. Cummings, School of Architecture, Architectural Association, who was awarded a Special Scholarship of £50 for the year 1925-26, has been awarded a second year Scholarship of £75 for the year 1926-27, and Mr. W. R. Brinton, School of Architecture, Architectural Association, who was awarded a Scholarship of £50 for the year 1925-26, has been granted a renewal of his Scholarship for the year 1926-27.

THE R.I.B.A. (HENRY SAXON SNELL) PRIZE 1926-1927.

The attention of competitors is called to the fact thas on page 28 of the current R.I.B.A. Prizes and Studentshipt Pamphlet the list of drawings required for an Isolation Hospital includes an "$\frac{1}{8}$ inch detail of a sanitary block and any special feature of the design." This should read "$\frac{1}{2}$ *inch* detail. . . . etc."

ASHMOLEAN MUSEUM, OXFORD

PROPOSED WINDOW TO WREN

SUBSCRIPTION LIST

The following additional subscriptions have been received from members of the Institute :—

Sir Banister Fletcher, Vice-President R.I.B.A.	£1 1 0
Mr. E. Stanley Hall, Hon. Secretary, R.I.B.A.	£1 1 0
Messrs. Wm. and T. R. Milburn [*FF.*] -	£1 1 0
Mr. Louis de Soissons [*F.*] - - - -	£1 1 0

Notices

THE INAUGURAL GENERAL MEETING.

The first General Meeting (Ordinary) of the Session 1926–27 will be held on Monday, 1 November 1926, at 8.30 p.m., for the following purposes :—

To read the minutes of the Fifteenth General Meeting of the Session 1925–26, held on 21 June 1926 ; formally to admit members attending for the first time since their election or transfer.

To read the names of candidates nominated for election on 29 November 1926.

Mr. E. Guy Dawber, F.S.A. (President), to deliver the Inaugural Address of the Session.

ARCHITECTS' DEFENCE UNION.

A meeting of architects will be held in the R.I.B.A. Meeting Room, on Monday, 18 October, 1926, at 6 p.m., to consider the scheme for the formation of an Architects' Defence Union.

The chair will be taken by Major Harry Barnes, and the proposals will be submitted by Mr. J. Douglas Scott, Chairman of the R.I.B.A. Practice Standing Committee.

All architects are cordially invited to attend.

EXHIBITION OF DOMINION AND COLONIAL ARCHITECTURE.

The Exhibition will be open in the R.I.B.A. Galleries from Wednesday, 20 October, to Wednesday, 17 November 1926, inclusive, between the hours of 10 a.m. and 8 p.m. [Saturdays 5 p.m.] Admission free. The opening ceremony and Private View will take place on Tuesday, 19 October 1926, at 3 p.m. It is hoped that members will be present in large numbers.

R.I.B.A. ANNUAL DINNER, 1926.

The Annual Dinner will take place on Tuesday, 23 November 1926, in the Guildhall, E.C. (by the kinp permission of the City Corporation). H.R.H. the Prince of Wales [Hon. F.R.I.B.A.] has graciously consented to attend and present the Royal Gold Medal, 1926, to Professor Ragnar Ostberg. Full particulars are issued with this copy of the Journal.

ASSOCIATES AND THE FELLOWSHIP.

Associates who are eligible and desirous of transferring to the Fellowship Class are reminded that if they wish to take advantage of the election to take place on 14 February 1927, they should send the necessary nomination forms to the Secretary R.I.B.A., not later than 27 November 1926.

LICENTIATES AND THE FELLOWSHIP.

The attention of Licentiates is called to the provisions of Section IV, clause 4 (*b*) and (cii), of the Supplemental Charter of 1925. Licentiates who are eligible and desirous of transferring to the Fellowship can obtain full particulars on application to the Secretary R.I.B.A., stating the clause under which they propose to apply for nomination.

THE R.I.B.A. NEW CLASS OF SUBSCRIBERS.

In the R.I.B.A. Supplemental Charter 1925, provision is made for the formation of a non-corporate class of Subscribers. The Council have the power to elect to this

class any persons who, not being professional architects, are interested in the activities of the Royal Institute and in architectural matters generally.

" Subscribers " are entitled to use the Loan and Reference Library, to attend all General Meetings (except private Business Meetings) and to receive a copy of the Annual Report. They are not, however, entitled to use in connection with their name or business any words or initials indicating that they are Members of or connected with the Royal Institute.

The annual contribution payable by a " Subscriber " is £1 1s. The first payment becomes due within two months of election and subsequent payments on the first of January each year. Subject to the additional payment of 12s. per annum, Subscribers also receive post free the R.I.B.A. JOURNAL, which is published fortnightly during the Session (November to June) and monthly during the recess

The Council cordially invite application from ladies or gentlemen who desire to be thus associated with the work of the Royal Institute, and the necessary nomination form can be obtained on application to the Secretary R.I.B.A.

There was an Exhibition on the walls of the galleries of Architects' Working Drawings, kindly lent by Mr. Sylvester Sullivan.

ROOMS FOR ARBITRATIONS, ETC.

Convenient rooms for arbitrations, etc., are now available for hire at No. 28 Bedford Square, W.C.1, at a fee of £2 2s. per day. All enquiries with regard to vacant dates, etc., should be addressed to Mr. C. McArthur Butler at that address.

R.I.B.A. REGISTRATION COMMITTEE.

Meetings of the R.I.B.A. Registration Committee are now being held at No. 28 Bedford Square, London, W.C.1, the premises lately occupied by the Society of Architects. All communications in connection with the Committee should be addressed to Mr. C. McArthur Butler, Secretary to the Registration Committee, at that address.

INFORMAL LECTURE ON ARCHITECTURE FOR WORKERS IN THE BUILDING TRADES.

The first of a series of Informal Illustrated Lectures on Architecture, confined to workers in the Building Trades, was held by the R.I.B.A. on Thursday, 7 October 1926, in the R.I.B.A. Galleries, 9 Conduit Street, W.1. Mr. Maurice E. Webb, D.S.O., M.C., Chairman of the Board of Architectural Education, was in the Chair, and Mr. L. Sylvester Sullivan [*F.*], Hon. Secretary of the Board of Architectural Education, read a paper on " The Job."

R.I.B.A. JOURNAL.

The attention of all Members is specially called to the importance of taking every legitimate opportunity of enhancing the advertising value of the R.I.B.A. JOURNAL. This does not mean that members are expected to urge contractors and manufacturers to advertise in the JOURNAL; they can, however, do a great deal if they will read the JOURNAL regularly and avoid any needless depreciation of its advertising value.

ELECTION OF MEMBERS.

29 NOVEMBER 1926.

The following applications for election have been received. Notice of any objection or other communication respecting the candidates must be sent to the Secretary for submission to the Council prior to Monday, 1 November 1926.

AS FELLOWS (40).

ALLISON : WILLIAM, P.A.S.I. [*A.* 1920], 50 Rathbone Place, W.1 ; 9 Tavistock Square, W.C.1.

AYLWIN : GUY MAXWELL [*A.* 1914], Blenheim Lodge, Mont au Pretre, Jersey, C.I.

BAGOT : WALTER HERVEY [*A.* 1904], Steamship Buildings, Adelaide ; Forest Lodge, Aldgate, South Australia.

BISHOP : JOHN PERCIVAL [*A.* 1901], 30 Duke Street, St. James', S.W.1 ; Topcliffe Grange, Farnborough, Kent.

BROWNLEE : HERBERT JOHN [*A.* 1912], 6 Church Square, Cape Town.

CLEVELAND : CHARLES BARRY [*A.* 1904], 2 Leader Lane, Toronto ; 60 Prince Arthur Avenue, Toronto, Canada.

COGGIN : CLARENCE TILT [*A.* 1881], 69 Kennington Oval, S.E. ; The White Cottage, Lifford Road, Wandsworth Common, S.W.

COWLEY : CAPTAIN HERBERT REGINALD, P.A.S.I. [*A.* 1913], Bank Chambers, 26 High Street, Southend-on-Sea ; The Cottage, 90 Eastwood Boulevard, Westcliff-on-Sea.

DAVIES : WILLIAM GEORGE [*A.* 1920], City Architect, Town Hall, Sheffield.

EATON : GEORGE MORLEY, P.A.S.I. [*A.* 1920], 6 The Strand, Derby ; Hillside, Littleover, nr. Derby.

FORD : LAWTON ROBERT, F.S.I. [*A.* 1896], 32 Orchard Street, Oxford Street, W.1 ; 58 Upper Berkeley Street, W.1.

GALL : ROBERT ROBB [*A.* 1903], 177 Union Street, Aberdeen ; 10 Loanhead Terrace, Aberdeen.

GAUNT : OLIVER [*A.* 1912], 4 Midan Suares, Cairo ; Maison Amato, Giza (Mudirieh), Cairo, Egypt.

GUMMER : WILLIAM HENRY [*A.* 1910], 721 New Zealand Insurance Buildings, Queen Street, Auckland ; Mountain Road, Auckland, New Zealand.

HAWARD : FRANCIS ROBERT BOYD [*A.* 1902], 5 Queen Street, Great Yarmouth ; Mansard, Poplar Avenue, Gorleston-on-Sea.

HILL : HENRY LEONARD GAUNTLETT, O.B.E. [*A.* 1890], Donhead Cottage, Donhead St. Andrew, Shaftesbury.

HORTH : FREDERICK JOHN [*A.* 1921], Custom House Buildings, Whitefriargate, Hull ; 19 Albany Street, Hull.

JAMES : CHARLES HOLLOWAY [*A.* 1918], 15 Gower Street, W.C.1 ; 1 Hampstead Way, N.W.11.

JONES : GEORGE SYDNEY [*A.* 1891], 113 Pitt Street, Sydney ; The Crescent, Pennant Hills, Sydney, Australia.

KERR : ROBERT SIDNEY [*A.* 1921], Grafton House, 2 Golden Square, W.1 ; 42 Addison Road, W.14.

LYNHAM : ARTHUR GEORGE [*A.* 1910], 23 Gelliwastad Road, Pontypridd ; Feinleigh, Heoldon, Whitchurch, Cardiff.

MAXWELL : JOSEPH CHARLTON [*A.* 1894], 14 Saville Row, Newcastle-on-Tyne ; Belfield, Kenton Road, Newcastle-on-Tyne.

NIGHTINGALE : FREDERICK BAYLISS [*A.* 1921], 31 Oakley Street, Chelsea, S.W.3 ; 7 Cricklade Avenue, S.W.2.

NORRIS : ERNEST BOWER [*A.* 1919], 9 Albert Square, Manchester ; 182 Corporation Street, Stafford.

WICKENDEN : ARTHUR FRED, A.M.Inst.C.E., P.A.S.I. [*A.* 1907], Professor of Architecture, Royal School of Engineering, Giza, Cairo, Egypt.

And the following Licentiates, who are qualified under Section IV, Clause C (ii) of the Supplemental Charter of 1925 :—

BROCKLEHURST : ARTHUR, Palatine Bank Buildings, 10 Norfolk Street, Manchester ; Sunny Bank, Newchurch-in-Rossendale, Lancs.

BUCK : WALTER GERARD, Shrewsbury Chambers, Campo Lane, Sheffield ; 10 Montgomery Road, Sheffield.

CAMERON : RHODERIC, St. Anns, Crieff Road, Aberfeldy, Perthshire.

CHANDABHOY : MUNCHERSHAH NUSSERWANJEE, Raja Bahadur Motilal Mansion, Apollo Street, Fort, Bombay, India.

GOODMAN : JOHN, 21 Waterloo Street, Birmingham ; 52 Salisbury Road, Moseley, Birmingham.

HARRISON : FRED, 30 Willow Street, Accrington ; Beechwood, Lytham St. Annes.

PROSSER : HOWELL, Architect to the Walthamstow Education Committee, Education Committee Offices, High Street, Walthamstow, E.17 ; 14 Eastfield Road, Walthamstow, E.17.

TOWNEND : THOMAS, District Bank Chambers, Rochdale ; 2 Ashfield Road, Rochdale.

And the following Licentiates who have passed the Qualifying Examination :—

CARYER : MAJOR GEORGE THOMAS, O.B.E., Public Works Department, Jerusalem, Palestine.

FORRESTER : ALFRED, 141 Albert Road, Middlesbrough ; 5 Clairville Road, Grove Hill, Middlesbrough.

HICKSON : CLIFFORD, St. Peter's Street, Huddersfield ; Five Gables, South Crosland, Huddersfield.

LAWSON : SYDNEY HERBERT, Emerson Chambers, Newcastle-on-Tyne ; Middleton, Belford, Northumberland.

TURNER : ROBERT CHARLES, 10 Haiphong Road, Gordon Road, Shanghai, China.

VINYCOMB : JOHN KNOX, 74 Park Lane, Wallington, Surrey.

WHESTON : WRAY, 47 Victoria Street, S.W.1 ; 7 Crauford Rise, Maidenhead.

AS ASSOCIATES (71).

ALEXANDER : RICHARD RENNIE [Passed six years' course at Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination after passing Examination in Professional Practice], 38 Lilybank Place, Aberdeen.

APPS : LESLIE MASON [Special], The Nest, Sutton Valence, Maidstone, Kent.

ARTHUR : JOHN ABERCROMBY [Final], 67 Torrington Square, W.C.

BARRETT : WALTER [Special], 111 Manchester Road, Bury, Lancs.

BARRINGTON-BAKER : JAMES [Final], Grove Lodge, Finchley, N.3.

BARTON : HERBERT LESLIE, B.Arch., Liverpool [Passed five years' course at Liverpool University School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], 14b Mortimer Crescent, N.W.6.

BENT : FRANK [Final], Min-y-don, Glan Conway, Denbighshire.

BOOTH : ROLFE GILBERT [Passed five years' course at Architectural Association. Exempted from Final Examination after passing Examination in Professional Practice], Lakeswood, Town Court, Orpington, Kent.

BOURNE : JOHN HENRY [Final], 24 Cotham Road, Cotham, Bristol.

BRUCE : WILLIAM GEORGE HAY BLACK [Passed six years' course at Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination after passing Examination in Professional Practice], 61 Watson Street, Aberdeen.

BRYCE : WILLIAM THEODORE PERCIVAL, M.A. Cantab., B.Sc. Arch. Glasgow [Passed five years' course at Glasgow School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], Farmfield, Penicuik, Midlothian.

CACHEMAILLE-DAY : NUGENT FRANCIS CACHEMAILLE [Final], 61 Grove End House, St. John's Wood Road, N.W.8.

CALDER : HERBERT KITCHENER [Passed six years' course at Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination after passing Examination in Professional Practice], 251 Westburn Road, Aberdeen.

CARTER : PETER GEORGE JEFFERY [Final], The Red Cottage, Peppard Road, Caversham, Oxon.

CARTER : RICHARD JEFFERY [Final], The Red Cottage, Peppard Road, Caversham, Oxon.

CHESTER : HAROLD WILLIAM [Final], 94 Langham Road, Teddington, Middlesex.

DAVIDSON : JAMES HENDERSON [Passed six years' course at Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination after passing Examination in Professional Practice], 16 Abercairn Road, Streatham, S.W.16.

DUNPHY : NORAH, B.Arch., Liverpool [Passed five years' course at Liverpool University School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], Donnybrook, Llandudno, N. Wales.

DURNIN : LEO [Passed six years' course at Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination after passing Examination in Professional Practice], 66 Blenheim Place, Aberdeen.

EDWARDS : KENDRICK, M.Inst.C.E. [Special], 16 Donegall Square South, Belfast.

FELGATE : ERIC GEORGE [Final], 11 Victory Road, Ilkley, Yorks.

FOUBISTER : PETER JOHN MALCOLM JOHNSTONE [Special], Public Works Department, Nairobi, Kenya Colony.

GOLDSMITH : EDWARD FELIX [Final], 11b Bishopswood Road, Highgate, N.6.

GREEN : FRANK STANLEY MORDEN [Final], 272 Willesden Lane, Cricklewood, N.W.2.

GREY : JOHN [Passed five years' course at Architectural Association. Exempted from Final Examination after passing Examination in Professional Practice], The White House, Cobham, Surrey.

HORNER : HUGH BALDWYNNE LYLE [Final], 31 Constantine Road, N.W.3.

INGLIS : FRANK ALEXANDER GREIG [Passed six years' course at Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination after passing Examination in Professional Practice], 286 Great Western Road, Aberdeen.

LEWIS : ERNEST WAMSLEY [Passed five years' course at Architectural Association. Exempted from Final Examination after passing Examination in Professional Practice), 9 St. Edmund's Terrace, Regent's Park, N.W.8.

LEY : ARTHUR HARRIS [Passed five years' course at Architectural Association. Exempted from Final Examination after passing Examination in Professional Practice], 214 Bishopsgate, E.C.2.

LLOYD : WILLIAM ANTONY SAMPSON, M.A. [Final], 39 Horseferry Road, Westminster, S.W.1.

MACDONALD : ALISTER GLADSTONE [Final], 9 Howitt Road, Hampstead, N.W.3.

MACMANUS : FREDERICK EDWARD BRADSHAW [Final], 39 Rotherwick Road, N.W.11.

MONROE : LEONARD [Passed five years' course at Cardiff Technical College. Exempted from Final Examination after passing Examination in Professional Practice], 27 Victoria Road, Penarth, South Wales.

MORRISON : JAMES [Passed six years' course at Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination after passing Examination in Professional Practice], 23 Upper Kirkgate, Huntly, N.B.

NASH : EDWARD TINDAL ELWIN [Final], The Cedars, Cranford, Middlesex.

NASH : VIVIAN LESLIE [Final], 7 Duncan Terrace, N.1.

OAKLEY : WILLIAM OWEN [Passed five years' course at Cardiff Technical College. Exempted from Final Examination after passing Examination in Professional Practice], 28 Monthermer Road, Cathays, Cardiff.

OLDACRE : WILLIAM BERNARD [Final], 130 Princes Road, Hartshill, Stoke-on-Trent.

PARKER : CAPTAIN ROBERT, M.C., P.A.S.I. [Special], Roslyn, Old Road, Llandudno.

PETERS : HENRY ALBAN, B.Arch. Liverpool [Passed five years' course at Liverpool University School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], 8 Union Road, Pennsylvania, Exeter.

PHILLIPS : HERBERT GORDON, B.Arch. Liverpool [Passed five years' course at Liverpool University School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], 27 Brelaide Road, Stoneycroft, Liverpool.

PRICE : ARTHUR JOHN [Final], The Hollies, Hilderstone, Stone, Staffs.

PRINGLE : GORDON, M.A.Cantab [Special], 1a Kensington Place, W.8.

PUNCHARD : STANLEY CHARLES [Final], 7 Second Avenue, Heaton, Newcastle-on-Tyne.

REMNANT : EUSTACE ARCHIBALD, P.A.S.I. [Special], 82 Cecil Avenue, Wembley, Middlesex.

RICHARD : JOHN CYRIL [Final], 24 Romsey Road, Winchester.

RITCHIE : JAMES WATSON, Dip.Arch. (Edin.) [Passed five years' course at Edinburgh College of Art. Exempted from Final Examination after passing Examination in Professional Practice], 6 Gladstone Terrace, Edinburgh.

ROBERTS : ALFRED GEORGES [Special], 27 Lawn Crescent, Kew Gardens, Surrey.

ROBERTS : DOUGLAS HUGH POYNTER [Final], 21 Grosvenor, Bath.

ROBERTS : THOMAS IDWAL [Special], 1 Carlton Terrace, Kelvinside, Glasgow.

ROBERTSON : ALBERT VICTOR [Passed six years' course at Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination after passing Examination in Professional Practice], Ardlea, 14 Attadale Road, Inverness.

SALT : GEOFFREY WYNDHAM [Final], The Royd, Selborne Road, Handsworth Wood, Birmingham.

SAUNDERS : DYCE CHALMERS [Final], 72 Walmer Road, Toronto, Canada.

SCOTT : CECIL JAMES [Special], Tolgarth, Rochford, Essex.

SEELY : HENRY JOHN ALEXANDER [Special], 3 Queen Square Place, Queen Anne's Gate, Westminster, S.W.1.

SIDNELL : WILLIAM EWART [Final], 12 Desenfans Road, Dulwich, S.E.21.

SLOOT : LAMBERT LOUIS THEODORE [Special], 3 Osmond Avenue, Hampton, Middlesex.

SMITH : FRANK HALLIBURTON [Passed five years' course at Architectural Association. Exempted from Final Examination after passing Examination in Professional Practice], 19 Redington Road, Hampstead, N.W.3.

SMITH : HARRY HIRST [Final], Merridale, 6 Hereford Road, Southport.

SNAILUM : TERENCE WALTER [Passed five years' course at Architectural Association. Exempted from Final Examination after passing Examination in Professional Practice], Wingfield Road, Trowbridge, Wilts.

SOPER : DOROTHY ELIZABETH [Passed six years' course at Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination after passing Examination in Professional Practice], Malcolm's Mount, Stonehaven, Kincardineshire.

SUTCLIFFE : BRIAN LISTER [Final], 44 Temple Fortune Hill, N.W.11.

THEOBALD : ROBERT COURTENAY, B.A.Lond. [Final], The Penn Club, 9 Tavistock Square, W.C.1.

THRASHER : WILLIAM JAMES [Final], Steine House, Brighton.

TRENT : WILLIAM SYDNEY [Final], 6 Broad Street Place, E.C.2

TYLER : ERIC BRIAN [Final], Kilbirnie, Llanishen, Cardiff.

WALL : MAUD AMY MARGARET [Passed five years' course at Liverpool University School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], 31 St. George's Mansions, Red Lion Square, W.C.1.

WATSON : JOHN, JUNR. [Passed five years' course at Glasgow School of Architecture. Exempted from Final Examination after passing Examination in Professional Practice], 7 Church Road, Giffnock, Renfrewshire.

WHITE : LEONARD WILLIAM THORNTON [Final], 80 Mayfield Street, Hull.

WILSON : EDWARD DOUGLAS [Final], 31 Cambridge Street, W.2.

WRIGHT : HUBERT [Special], 122 Clarence Gate Gardens, N.W.1.

AS HON. FELLOW (1).

LEE OF FAREHAM : THE RT. HON. VISCOUNT, P.C., G.C.S.I., G.B.E., K.C.B., 18 Kensington Palace Gardens, W.8.

AS HON. ASSOCIATES (5).

DAVISON : SIR WILLIAM HENRY, K.B.E., D.L., M.P., 14 Kensington Park Gardens, W.11.

HEATH : SIR HENRY FRANK, K.C.B., 5 Milbourne Lane, Esher Park, Surrey.

HILL : LEONARD ERSKINE, M.B., M.R.C.S., L.R.C.P., F.R.S., Fellow of University College, London; Director, Department of Applied Physiology, National Institute for Medical Research; Osborne House, Loughton, Essex.

STRADLING : REGINALD EDWARD, M.C., D.Sc., Ph.D., Assoc.M.Inst.C.E., Director of Building Research, Department of Scientific and Industrial Research, Building Research Station, Bucknall's Lane, Garston, near Watford.

WOOLLEY : CHARLES LEONARD, M.A., Uplands, Bathwick Hill, Bath.

AS HON. CORRESPONDING MEMBERS (8).

CLEMMENSEN : ANDREAS LAURITZ, Tingskiftevej 4, Copenhagen.

HÜLTL : DR. DESIDERIUS VON, Professor of the Technical University, Budapest, Rezoda utca 5, Budapest 1.

KORB : PROFESSOR FLORESTAN, VIII Baross utca 74, Budapest.

LEGROS : GEORGES, Chevalier de la Légion d'Honneur, Président de la Société des Architectes Diplomés par le Gouvernement, 121 Avenue de Wagram, Paris.

MEDARY : MILTON BENNETT, President, American Institute of Architects; Member, National Commission of Fine Arts, 47th Street and City Line, West Philadelphia, U.S.A.

MONBERG : CHRISTEN EMANUEL, Member of the Royal Academy of Art, Copenhagen, Amaliegade 29a, Copenhagen.

RAFU : AAGE, Amaliegade 27, Copenhagen.

WAID : DAN EVERETT, B.S., LL.D., 1 Lexington Avenue, New York, U.S.A.

Competitions

PERTH ACADEMY COMPETITION. LIMITED TO ARCHITECTS IN PRACTICE IN SCOTLAND.

The Conditions of the above Competition are in accordance with the R.I.B.A. Regulations for the Conduct of Architectural Competitions.

LEAGUE OF NATIONS BUILDING AT GENEVA.

The conditions of the competition for the new building at Geneva have been received. The jury consists of M. H. P. Berlage (The Hague), Sir John J. Burnet (London), M. Charles Gato (Madrid), M. Joseph Hoffman (Vienna), M. Victor Horta (Brussels), President; M. Charles Lemaresquier (Paris), M. Karl Moser (Zurich), M. Attilio Muggia (Bologna), M. Ivar Tengbom (Stockholm). The competition will be open until 25 January 1927. Total cost including the architect's fees should in no case exceed the total sum of 13 million Swiss francs. Copies of the conditions may be obtained at the Secretariat, Geneva, at a cost of 20 Swiss francs.

RECONSTRUCTION OF THE MOSQUE OF AMROU, CAIRO, COMPETITION.

Members of the Royal Institute who are considering taking part in the above competition are strongly recommended to consult the Secretary R.I.B.A. before deciding to compete.

SCHEME FOR BUILDING LARGE RESIDENCES, CAIRO.

The Competitions Committee desire to call the attention of Members to the fact that the conditions of the above competition are not in accordance with the Regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime Members are advised to take no part in the competition.

COMPETITION FOR THE LAYOUT OF HOUSES ON PENY-WAUN SITE.

The Competitions Committee desire to call the attention of Members to the fact that the Conditions of the above Competition are not in accordance with the Regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime Members are advised to take no part in the Competition.

MANCHESTER TOWN HALL EXTENSION.

PRELIMINARY COMPETITION.

The Corporation of the City of Manchester invite architects to submit designs in competition for the Town Hall Extension, Municipal Offices, and Public Reference Library proposed to be erected on a site adjoining the Town Hall. Assessors, Mr. T. R. Milburn [*F.*], Mr. Robert Atkinson [*F.*] and Mr. Ralph Knott [*F.*]. Last day for questions 2 October 1926. Final date for submission of designs 8 January 1927. Conditions may be obtained by applying to the Town Clerk, Town Hall, Manchester, and depositing £1 1s.

Members' Column

MR. R. ELSEY SMITH

Mr. R. Elsey Smith [F] has taken offices at 235 Westminster Bridge Road (opposite the County Hall), where he is resuming general and consulting practice from 1 October.

MESSRS. H. E. HAWKER AND PARTNERS.

H. E. HAWKER, F.R.I.B.A., F.S.I., Architect and Surveyor, St. Peter's Chambers, Bournemouth, has taken into partnership William John Mountain, L.R.I.B.A., and Alfred G. S. Bailey, L.R.I.B.A., who have respectively been associated with him for upwards of twenty years. The style of the firm will be Messrs. H. E. Hawker and Partners, and the practice will be continued at St. Peter's Chambers, Bournemouth.

MESSRS. WITTEN AND WALKER.

MR. R. BOUTFLOUR WITTEN, L.R.I.B.A., and Mr. Smart Walker, L.R.I.B.A., have entered into partnership under the name of Witten & Walker, L.L.R.I.B.A., with offices at 144A Newgate Street, Bishop Auckland and Colburn Estate Offices, Hildyard Row, Catterick Camp, Yorks.

PREMIUM PUPIL.

A.R.I.B.A. wishes to get into touch with a firm of Architects willing to take a Premium Pupil.—Apply Box No. 8106, c/o The Secretary R.I.B.A., 9 Conduit Street, London, W.1.

"DAILY MAIL" IDEAL HOUSES COMPETITION.

LICENTIATE, expert Perspectivist, offers to prepare perspectives for the above in accordance with the conditions for a moderate fee. Inquiries invited.—Apply Box 8246, c/o The Secretary R.I.B.A., 9 Conduit Street, London, W.1.

APPOINTMENT VACANT.

HONGKONG.—Required by leading firm of Architects and Civil Engineers in Hongkong, the services of first-class Architectural Assistant, preferably an A.R.I.B.A.; three years' agreement, with prospects of partnership. Salary $700 Mex. per month. Applications, with full particulars, qualifications, etc., to Box 6106, c/o The Secretary R.I.B.A., 9 Conduit Street, London, W.1.

APPOINTMENT WANTED.

A.R.I.B.A. desires position or partnership, preferably abroad. Has had experience of English County education and Colonial Government work, and has managed for the last three years a general practice abroad. Competitions, working drawings, quantities and supervision, used to construction in reinforced concrete. Photographs of work can be seen on application at the R.I.B.A.—Reply Box 2232, c/o The Secretary R.I.B.A., 9 Conduit Street, London, W.1.

ASSISTANCE OFFERED.

LICENTIATE, own London office, 'phone, etc., offers assistance to other architects. Designs, Perspectives, Details and Working Drawings. First-class experience. Terms reasonable.—Box 1210 c/o The Secretary, R.I.B.A., 9 Conduit Street, London, W.1.

CHANGES OF ADDRESS.

MR. A. BRYETT [*A.*] has changed his address to 36 Ebury Street, S.W.1.

MESSRS. CHAS. HEATHCOTE & SONS, of Manchester and London, are leaving their present London address (38 Parliament Street, S.W.) owing to the expiration of their lease, and all communications should, after 11 October, be made to them at 20 Scarsdale Villas, Kensington, until further notice.

MR. BASIL B. HOOPER [*A.*] has changed his address from A.M.P. Buildings, Victoria Street, to Southern Cross Building, Chancery Street, Auckland, N.Z. Telephone: 45267.

MR. W. COURTENAY LE MAITRE, F.R.I.B.A., has changed his address from 133 Moorgate, E.C.2, to 28 Albemarle Street, W.1. Telephone No.: Ger. 1169.

TRADE CATALOGUES.

MISS BARBARA POUSHKINE [*A.*] is opening an office on 20 October at Lee Studio, Adam and Eve Mews, High Street, Kensington. (Tel., 8056 Kelvin) and will be glad to receive trade catalogues.

ROOM TO LET.

FIRM of Architects have small room to let in Adelphi, W.C. Quiet, good light, fireplace, separate door to landing and communicating door to own Drawing Office. Facilities for use of latter, including typewriting and telephone, can be arranged. Inclusive rent £40 p.a.—Apply Box No. 1106, c/o The Secretary R.I.B.A., 9 Conduit Street, London, W.1.

OFFICE WANTED.

A.R.I.B.A. requires offices, or would consider sharing suite. West or Westminster district. Please state full particulars with inclusive terms.—Apply Box No. 1011, c/o Secretary R.I.B.A., 9 Conduit Street, W.1

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